UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Note to Reader

Background: As part of its effort to involve the public in the implementation of the Food Quality Protection Act of 1996 (FQPA), which is designed to ensure that the United States continues to have the safest and most abundant food supply. EPA is undertaking an effort to open public dockets on the organophosphate pesticides. These dockets will make available to all interested parties documents that were developed as part of the U.S. Environmental Protection Agency's process for making reregistration eligibility decisions and tolerance reassessments consistent with FQPA. The dockets include preliminary health assessments and, where available, ecological risk assessments conducted by EPA, rebuttals or corrections to the risk assessments submitted by chemical registrants, and the Agency's response to the registrants' submissions.

The analyses contained in this docket are preliminary in nature and represent the information available to EPA at the time they were prepared. Additional information may have been submitted to EPA which has not yet been incorporated into these analyses, and registrants or others may be developing relevant information. It's common and appropriate that new information and analyses will be used to revise and refine the evaluations contained in these dockets to make them more comprehensive and realistic. The Agency cautions against premature conclusions based on these preliminary assessments and against any use of information contained in these documents out of their full context. Throughout this process, If unacceptable risks are identified, EPA will act to reduce or eliminate the risks.

There is a 60 day comment period in which the public and all interested parties are invited to submit comments on the information in this docket. Comments should directly relate to this organophosphate and to the information and issues available in the information docket. Once the comment period closes, EPA will review all comments and revise the risk assessments, as necessary.

These preliminary risk assessments represent an early stage in the process by which EPA is evaluating the regulatory requirements applicable to existing pesticides. Through this opportunity for notice and comment, the Agency hopes to advance the openness and scientific soundness underpinning its decisions. This process is designed to assure that America continues to enjoy the safest and most abundant food supply. Through implementation of EPA's tolerance reassessment program under the Food Quality Protection Act, the food supply will become even safer. Leading health experts recommend that all people eat a wide variety of foods, including at least five servings of fruits and vegetables a day.

Note: This sheet is provided to help the reader understand how refined and developed the pesticide file is as of the date prepared, what if any changes have occurred recently, and what new information, if any, is expected to be included in the analysis before decisions are made. **It is not meant to be a summary of all current information regarding the chemical.** Rather, the sheet provides some context to better understand the substantive material in the docket (RED chapters, registrant rebuttals, Agency responses to rebuttals, etc.) for this pesticide.

Further, in some cases, differences may be noted between the RED chapters and the Agency's comprehensive reports on the hazard identification information and safety factors for all organophosphates. In these cases, information in the comprehensive reports is the most current and will, barring the submission of more data that the Agency finds useful, be used in the risk assessments.

Jack E. Housenger, Acting Director
Special Review and Reregistration Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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OFFICE OF
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AND TOXIC SUBSTANCES

December 22, 1999

MEMORANDUM

SUBJECT: Diazinon: Refined Anticipated Residues / Acute and Chronic Dietary Risk Assessment. Chemical No. 057801; DP Barcode D261399.

FROM: Sheila Piper, Chemist
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THROUGH: D. Soderberg, Chemist
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and
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TO: Catherine Eiden, Risk Assessor
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Action Requested

In support of reregistration of Diazinon, conduct chronic and acute dietary exposure assessments. Use all available data, including usage, monitoring and processing information to conduct a highly refined analyses. Include a worst-case chronic analysis for use of diazinon in food handling establishments.

Note: At the request of SRRD this assessment includes estimates of exposure from food commodities on which diazinon uses are not being supported for reregistration (see page 12

for a complete explanation of foods included).

This dietary exposure assessment is a revision of a preliminary assessment dated October 18,1999 (D259764). This revision contains a number of minor editorial and numerical corrections, and additional usage information on dermal treatments of sheep with diazinon.

Executive Summary

Tier 3 refined dietary exposure assessments for both chronic and acute risk are provided in this document and its attachments.

Chronic Dietary Exposure

The chronic population adjusted dose (cPAD) for diazinon is 0.0002 mg/kg body wt/day. The estimated chronic dietary exposure ranged from a low of 0.000009 mg/kg body wt/day (4% of cPAD) for male teenagers to a high of 0.000033 mg/kg body wt/day (17% of cPAD) for non-hispanic/non-white/non-blacks. The exposure for the total U. S. Population was 0.000019 mg/kg body wt/day (10% of cPAD). For the highest exposed subpopulation the major contributors to the exposure estimate were sheep meat and fat (36% of total exposure).

A discussion of potential dietary exposure to diazinon from uses in food handling establishments is included. It is concluded that it is unlikely that food handling establishment uses of diazinon will result in any residues on foods as long label directions are followed.

Acute Dietary Exposure

The acute PAD (aPAD) for diazinon is 0.0025 mg/kg body wt/day. The estimated acute dietary exposures at the 99.9th percentile ranged from a low of 0.0.00044 mg/kg body wt/day (18% aPAD) for females 13-19 yrs/np/nn to a high of 0.001606 mg/kg body wt/day (64% aPAD) for non-hispanics/non-white/non-black. A major contributor to the estimated exposure for meat eating consumers was sheep fat and meat. It should be noted that the anticipated residues for these commodities are conservatively high, assuming a 1x label rate with a 3-day or less pre-slaughter interval for 37% of sheep consumed. If sheep fat and meat are excluded from the analysis then the estimated acute dietary exposure drops significantly for those consumers that would be expected to eat sheep. For the non-hispanic-other group the exposure at the 99.9th percentile dropped from 64 % aPAD to 35% aPAD. Overall the exposure (minus sheep fat and meat) at the 99.9th percentile ranged from a low of about 11% aPAD for females 13-19 (not pregnant or nursing) to a high of about 47% aPAD for children 1 to 6 years old.

Toxicological Information

Diazinon is a cholinesterase inhibitor. The Health Effects Division (HED) Hazard Identification Assessment Review Committee (HIARC), has reevaluated the toxicity data base for diazinon (Diazinon - Replacement of Human Study Used in Risk Assessments - Report of the Hazard Identification Assessment Review Committee dated Sept 21, 1999) and established an acute Reference Dose (RfD) and a chronic RfD. The HED Food Quality Protection Act (FQPA) Safety Factor Committee has evaluated the toxicity data and exposure data (FQPA Safety Factor Recommendations for the Organophosphates, FQPA Safety Committee Report dated August 6, 1998) and determined that the 10X uncertainty (UF) factor required by FQPA under certain circumstances can be **removed**.

The doses and toxicological endpoints selected for dietary exposure to diazinon are summarized below.

EXPOSURE SCENARIO	**DOSE**	**ENDPOINT**	**STUDY**
Acute Dietary	NOAEL=0.25 mg/kg	Plasma cholinesterase inhibition	Acute Neurotoxicity - Rat Special Study-Rat
	UF =100 FQPA=1	**Acute RfD = 0.0025 mg/kg/day** **aPAD* = 0.0025 mg/kg/day**	
Chronic Dietary	NOAEL=0.02 mg/kg/day	Consistent pattern of NOAELs observed for cholinesterase inhibition.	4 week, 90 day and 1-year studies in dog 4 week, 90 day and 2 -year studies in rat
	UF= 100 FQPA=1	**Chronic RfD = 0.0002 mg/kg/day** **cPAD* = 0.0002 mg/kg/day**	
* aPAD or cPAD = acute or chronic Population Adjusted Dose = Acute or Chronic RfD÷FQPA Safety Factor			

Residue Information

Reregistration background

Diazinon (O,O-diethyl O-[6-methyl-2-(1-methylethyl)-4-pyrimidinyl] phosphorothioate) is an insecticide currently registered for soil and foliar applications to various food and feed commodities. Diazinon is also registered for crack and crevice treatments in food handling establishments and for dermal applications to sheep. Diazinon is a List A FIFRA reregistration chemical that was the subject of a Reregistration Standard Guidance Document dated 12/88 and a 1992 Reregistration Standard Update; a 1996 Data Call-In (DCI) was also issued. The Residue

Chemistry Chapter of the Diazinon Reregistration Eligibility Decision (RED) is being completed in conjunction with this document and reflects the evaluation of all of the submissions made in response to the earlier reregistration documents.

Tolerances

Tolerances for diazinon residues in/on plant raw agricultural commodities (RACs), in processed food, and in animal feed are currently expressed in terms of diazinon *per se* [40 CFR §180.153]. Tolerances are also established for meat commodities of cattle and sheep to cover residues from dermal application. There are no tolerances for residues in milk, poultry or eggs.

Residues of Concern in Dietary Exposure Assessments

The HED Metabolism Committee has determined that the residues of concern in plants and animals are diazinon, hydroxy diazinon, and diazoxon (Diazinon: Decision from the HED Metabolism Assessment Review Committee, David Hrdy, 4/17/98, D244848). The committee recommended that for enforcement purposes, diazinon, *per se* be included in the tolerance expression and that residues of diazinon and its metabolites, hydroxy diazinon and diazoxon, be considered in dietary risk assessment. Both of these metabolites are considered to be cholinesterase inhibitors. Implicit in the committee decision was the provision that metabolites would be included if they were found to be present or if their level could be reliably estimated in foods. In the current assessment no residues of metabolites were evident in any of the data with the exception of one dried fig sample from a field trial and one fresh spinach sample analyzed by PDP in 1997. With the exception of these two analyses, this assessment assumed no contribution to the dietary exposure from the two metabolites.

The following discussion is provided to explain the rationale and data that support our decision to exclude the metabolites from this assessment.

Rationale for Conducting the Current Assessment on Diazinon, *per se*

Based on a review of adequate plant metabolism studies for apples, lettuce, corn, potatoes, and green beans, no residues of the diazinon oxon or hydroxy diazinon were identified in either organic or aqueous fractions. All of the diazinon metabolites were identified as pyrimidine compounds or glucose conjugates of these compounds. Neither these metabolites or their conjugates contain the cholinesterase inhibiting moiety and are not considered to be of significant toxicological concern for cholinesterase inhibition.

A review of residue field trial data for 25 crops and approximately 2000 samples analyzed for diazinon oxon and hydroxy diazinon indicated the following: for samples treated at the equivalent of currently-labeled 1X application rates and harvested at the currently-labeled post-harvest intervals (PHIs), all samples showed non-detectable residues (<0.01 ppm) for all crops, except for celery, spinach, and peppers. Hydroxy diazinon was detected in celery after a 1X pre-plant, soil-incorporated application combined with a 1X foliar application up to the post-harvest interval

(PHI). Current label rates for celery no longer include the foliar applications close to the time of harvest, but do include a pre-plant, soil-incorporated application. The new use pattern, may lower detectable residues on harvested celery. Diazinon oxon and hydroxy diazinon residues were detected in spinach at 2% and 1% of the parent compound, respectively. Hydroxy diazinon was detected in peppers at low levels above the detection limit (0.07 ppm) approximately 27% of the parent compound. Foliar application rates for peppers have been lowered 3-fold (3X) from 3.75 lbs ai/A/season to 1.25 lbs ai/A/season on current labels, and the PHI used in the study was 3 days versus the currently-labeled 5 days. The new use pattern may lower residues on peppers. The summary data for these 3 crops indicated that 1 spinach sample and 4 pepper samples contained detectable metabolite residues. It was unclear how many celery samples (1 or more) were positive for the hydroxy diazinon metabolite.

The USDA Pesticide Data Program (PDP) has surveyed pesticide residues in selected food items since 1991. Final data are available for diazinon up through 1997. In this assessment we have considered these final data, as well as, preliminary data from the years 1998 and 1999. The PDP program has reported analyses for diazinon *per se* for almost all commodities up through 1998. The preliminary 1999 data include analyses for the diazinon oxon for single servings of apples, as well as, composited samples of apples, peppers, spinach, strawberries, and tomatoes. For the 1997 data, out of 11 crops and more than 7000 samples analyzed, no detectable diazinon oxon residues were reported with the exception of 1 spinach sample that contained residues at 50% of the parent compound. Although not normally included in the analyses, an unidentified chromatogram peak was investigated on 1 spinach sample and was determined to be the oxon of diazinon. The preliminary 1998-1999 data on 5 crops (apples, peppers, spinach, strawberries, and tomatoes) show no detectable diazinon oxon residues in any of the more than 1400 samples analyzed. FDA monitoring data for diazinon and the hydroxy and oxon metabolites were considered for the years 1992 through 1998. There were no reports of detectable residues of the metabolites of diazinon for these years either in domestic or imported foods (the limit of detection for diazinon and metabolites in FDA surveillance data is assumed to be 0.003 ppm).

Based on the above information, residues for hydroxy diazinon and diazinon oxon were assumed to be zero in the dietary assessment unless residues were reported. The preponderance of residue data from metabolism studies, residue field trials and monitoring data (USDA PDP and FDA Surveillance Monitoring data) indicate that these two metabolites are infrequently to never detected for the majority of crops analyzed for diazinon oxon and hydroxy diazinon. If there is a concern regarding how the metabolites were handled in the dietary assessments, HED could revise the current dietary assessments to include the residues of these compounds where warranted on a crop-specific basis, but there appears to be no cogent rationale for including these metabolites in all crops at some default value in light of the available residue data. HED does not recommend assuming ½ the limit of detection values for both metabolites across all crops. HED believes this would result in an overly conservative assessment driven by these values because of the relatively low levels of diazinon, *per se.*

Sources of Residue Data

The anticipated residues in this assessment are based on the following sources, in order of preference: USDA PDP monitoring data, FDA surveillance monitoring data, and controlled field trial data. The monitoring data are preferred over field trial data because samples are more reflective of residues that may occur on foods as consumed. The PDP data are preferred because, in general, more samples are taken and the sampling protocols have been designed to reflect variations in consumption patterns throughout the year and geographically. PDP samples include both domestic and imported foods.

The USDA Pesticide Data Program (PDP) has surveyed pesticide residues in selected food items since 1991. Data are publically available for diazinon up through 1997. In this assessment we have considered these data as well as preliminary data from the years 1998 and1999. The PDP program has reported analyses for diazinon *per se* for all commodities except for a single serving study on apples conducted in 1999. The oxygen analog was included in analyses for this commodity but no detectable residues were reported.

FDA monitoring data for diazinon and the 2 metabolites of concern were considered for the years 1992 through 1998. There were no reports of detectable residues of the metabolites of diazinon for these years. Data were combined for all years and included only domestic surveillance data unless otherwise noted. Results from monitoring data are not generally used unless at least 100 samples have been analyzed. The limits of detection are not reported individually for each pesticide/commodity pair so an assumption is made based on knowledge of the sensitivity of multiresidue methods used and the lowest values reported for detectable samples. For purposes of this assessment the limit of detection for diazinon and metabolites is assumed to be 0.003 ppm.

In several cases (see Table 1) monitoring data were translated to similar commodities in accordance with guidance found in HED SOP 99.3 for Translation of Monitoring Data (March 26, 1999). For those cases in which field trial data were used the anticipated residues were based on the maximum supported use patterns, as summarized in the Residue Chemistry Chapter of the RED. If neither adequate monitoring data nor information on supported use patterns were available then residues were assumed to be at the tolerance level.

Table 1. Diazinon: Translation of Pesticide Monitoring Data.

Commodity Analyzed	**Source of Data**	**Commodity Translated to**
Peach	PDP	Apricot, Nectarine
Spinach	PDP	Garden Beet tops, Turnip tops, Parsley, Dandelion
Blackberry/Raspberry	FDA	Other Caneberries
Orange	PDP	Other Citrus
Orange Juice	PDP	Other Citrus Juice

Commodity Analyzed	Source of Data	Commodity Translated to
Carrots	PDP	Parsnip, Rutabaga, Turnip root, Ginseng
Garden Beet Roots	FDA	Sugar Beets
Celery	PDP	Swiss Chard
Collards, Kale, Mustard Greens combined	FDA	Combined residue data used
Lettuce	PDP	Radicchio
Bok choy	FDA	Chinese broccoli
Broccoli	FDA	Brussels sprouts
Cauliflower	FDA	Kohlrabi
Green Onions	FDA	Leeks
Bulb Onions	FDA	Shallots, Garlic
Green Peppers	FDA	Other peppers, Hot Peppers
Cantaloupe	FDA	Casaba, Crenshaw, Honeydew, Persian Melon, Balsam Pear, Bitter Melon,Wintermelon
Green Beans	PDP	All Succulent Beans, Succulent Blackeyed Peas
Bananas	PDP	Plantain
Radish and Oriental Radish combined	FDA	Oriental Radish
Wheat Grain	PDP	Sorghum

Percent Crop Treated Data

A quantitative usage analysis for diazinon was provided by BEAD based on data years 1987-96 (Alan Halvorson, QUA date: January 29, 1999) and is included as Attachment 1 to this document. Data sources included USDA/NASS (1990-97), California EPA Department of Pesticide Regulation (1993-95), National Center for Food and Agricultural Policy, and various proprietary data sources (1987-97). The weighted average of percent crop treated was used for estimating chronic dietary exposure and an estimated maximum percent crop treated was used for estimating acute dietary exposure. Percent crop treated information was used either as a predictor of the probability of residues occurring on a given monitoring sample or, in the case of blended commodities and for chronic exposure, as an adjustment factor to the average residue occurring in a commodity. For some of the PDP commodities, imported samples comprise a significant portion of the database. In those cases the percent crop treated information provided by BEAD was adjusted to account for imports. The assumption was made for imports that 100% of the

crop had been treated.

Processing Factors

All processing factors used in this assessment are summarized in Table 2. These factors are input into the DEEM software as adjustment factor #1 (see attached printouts of DEEM inputs).

Table 2. Diazinon Processing Factors Summary

Category	Processing Factor used for current analysis	Data Sources	Comments and Agency Reviews
Apples-dried	8	DEEM Default	
Apples-juice/cider	1		Monitoring data used for juice
Apples-juice-concentrate	3	Ratio of Default factors for juice & concentrate	Conc. factor applied to juice data
Apricots-dried	6	DEEM Default	
Bananas-dried	3.9	DEEM Default	
Cherries-dried	4	DEEM Default	
Cherries-juice	1.5	DEEM Default	
Cottonseed meal	0.44	MRID 00032881	S. Funk, 4/17/92 used average factor from all studies with detectable residues
Cottonseed Oil	2.2	MRID 00032881	S. Funk, 4/17/92 used average factor from all studies with detectable residues
Cranberries-juice	1.1	DEEM Default	
Cranberries-juice-concentrate	3.3	DEEM Default	
Grapefruit-juice	1		Used orange juice monitoring data
Grapefruit-juice-concentrate	3.9	Ratio of Default factors for juice & concentrate	Factor applied to orange juice monitoring data

Category	Processing Factor used for current analysis	Data Sources	Comments and Agency Reviews
Grapes-juice	1	MRID 41410001	A factor of 0.02 for juice had been demonstrated S. Funk, 4/17/92 Don't use factor because juice data are available
Grapes-juice-concentrate	3	Ratio of Default factors for juice & concentrate	
Grapes-raisins	0.13	MRID 41410001	S. Funk, 4/17/92 used average factor from all studies with detectable residues
Lemons-juice	1		Used orange juice monitoring data
Lemons-juice-concentrate	5.7	Ratio of Default factors for juice & concentrate	Factor applied to orange juice monitoring data
Limes-juice	1		Used orange juice monitoring data
Limes-juice-concentrate	3	Ratio of Default factors for juice & concentrate	Factor applied to orange juice monitoring data
Onions-dehydrated or dried	9	DEEM Default	
Oranges-juice	1		Used orange juice monitoring data
Oranges-juice-concentrate	3.7	Ratio of Default factors for juice & concentrate	Factor applied to orange juice monitoring data
Peaches-dried	7	DEEM Default	
Pears-dried	6.25	DEEM Default	
Pineapples-dried	5	DEEM Default	
Pineapples-juice	0.12	MRID 42179501	P. Deschamp, 6/3/92, D174774

Category	Processing Factor used for current analysis	Data Sources	Comments and Agency Reviews
Pineapples-juice-concentrate	0.44	MRID 42179501	(juice factor) X (ratio of DEEM defaults for juice & concentrate)
Plantains-dried	3.9	DEEM Default	
Plums/prunes-juice	1.4	DEEM Default	
Plums/prunes-dried	0.6	MRID 43274401	S. Funk, 5/24/93,D189573
Potatoes/white-dry	6.5	DEEM Default	
Sugar-beet-molasses	0.5	MRID 41336514	Diazinon Reg. Std. Update, 1/24/92
Tangerines-juice	1		Used orange juice monitoring data
Tangerines-juice-concentrate	3.2	Ratio of Default factors for juice & concentrate	Factor applied to orange juice monitoring data
Tomatoes-catsup	0.30	MRID 41336508	S. Funk, 4/17/92 used average factor from all studies with detectable residues
Tomatoes-dried	14.3	DEEM Default	
Tomatoes-juice	0.05	MRID 41336508	S. Funk, 4/17/92 used average factor from all studies with detectable residues
Tomatoes-paste	0.60	MRID 41336508	S. Funk, 4/17/92 used average factor from all studies with detectable residues
Tomatoes-puree	0.70	MRID 41336508	S. Funk, 4/17/92 used average factor from all studies with detectable residues

Dietary exposure assessment

The following commodities, for which all uses have been canceled and tolerance revocations have been initiated, are not included in the current assessment:

- olives
- peanuts
- pecans
- soybeans
- sugarcane
- beans, guar
- cowpeas

The potential for transfer of residues to meat, milk, poultry and eggs from animal feeds has been reassessed. It has been determined that the criteria exist for a category 3 situation as described in 40 CFR 180.6(a), i.e., no tolerance is needed because there is no reasonable expectation of finite residues to occur in these commodities except in sheep as a result of dermal treatments. Dermal treatments are not being supported for any livestock or poultry except sheep. Therefore, the following commodities are not included in the current assessment:

- milk
- all poultry meats and meat byproducts
- eggs
- all livestock meats and meat byproducts except for those of sheep

Uses of diazinon on the following crops are not being supported by the registrant; however, SRRD has requested that they be included in the present assessment pending a determination of whether any other interested party wishes to support them.

- citrus fruits
- coffee
- cotton
- filberts
- kiwi fruits
- sorghum

Tolerance level residues were assumed to be present in coffee and cottonseed. The registrant is not supporting uses on alfalfa but tolerances are established for forage(40 ppm) and hay(10 ppm). The only alfalfa food commodity is alfalfa sprouts. This commodity is not being considered in the present assessment because, in our judgement, there is little likelihood for use of diazinon on alfalfa seeds grown for sprouts or from dietary exposure to diazinon via consumption of sprouts.

Anticipated residues were derived in accordance with established Agency policies and guidance for chronic and acute dietary exposure assessments. Chronic residues are generally based on the

mean of the best available residue data with appropriate adjustments for percent crop treated and residue concentration/reduction from processing. Acute anticipated residues were derived using guidance provided in HED SOP 99.6 (Classification of Food Forms with Respect to Level of Blending (8/20/99)). Each food form entered in the DEEM software for dietary exposure assessments is classified as being blended (B), partially blended (PB), or not blended (NB). As more extensively described in the SOP, PDP and FDA monitoring data, which are generally based on composite samples, may be used to construct residue distributions for input into a Monte Carlo analysis using the DEEM software. If foods are blended (B or PB) the entire distribution of monitoring data can be used to represent a distribution. If the foods are classified as not blended (NB) then further evaluation of PDP and FDA data are required before compiling a residue distribution. The composited samples from PDP and FDA (5- to 20 lbs) may not reflect residue levels in single servings of commodities that are not blended. Thus, these monitoring data should be "decomposited" via a suitable statistical procedure in order to simulate a distribution of single serving commodities. In the current analysis we are using a procedure developed by HED (Allender, H. "Use of the Pesticide Data Program (PDP) in Acute Dietary Assessment," EPA interim guidelines, August 1998). This decompositing procedure requires that the available monitoring data contain at least 30 detects. If fewer than 30 detects occur then a judgement is made as to whether the composite data set may be used either directly or with an appropriate multiplication factor. These considerations are also discussed at length in the SOP 99.6.

In the current assessment we have applied certain assumptions to using the available composite monitoring data for foods that are not blended. For the most part these assumptions are derived from HED standard procedures and guidance but some individual judgements have been incorporated. The criteria and assumptions are as follows:

- If monitoring data for a not-blended food contain enough detectable residues (~30 or more), then the data are decomposited with the Allender method. This method produces a lognormal distribution of residue values that is used in a Monte Carlo analysis.

- The lognormal distribution obtained by the Allender method is truncated at the tolerance level for the commodity of interest. Although tolerances are also based on composite samples, these are from controlled field trials in which it is assumed that all components of the composite have been treated with the maximum allowable level of diazinon. Therefore, it is assumed that the tolerance, which is based on a rounded up maximum residue value from field trials, would not be exceeded in single servings if good agricultural practices are followed.

- If significantly fewer than 30 detectable residues occur in the monitoring data then the Allender method is not used. If the monitoring data contain very low residues then they are used directly with the assumption that residue levels could not be underestimated significantly. If some of the residues are significantly higher than the LOD of the analytical method then a multiplication factor is applied to the detected residues as a conservative simulation of residues that may occur in single servings within a given composite sample. This factor is derived as follows: The tolerance for the commodity of

interest is divided by the highest residue level reported. All detects for that commodity are multiplied by this factor and the adjusted data are used directly to construct a residue distribution for Monte Carlo analysis.

ESTIMATION OF ANTICIPATED RESIDUES FOR INDIVIDUAL FOODS

The inputs for acute and chronic exposure for each food commodity are described in Tables 3 and 4 and in the following sections. In some cases it may be necessary to see attachments to this document for actual numeric inputs to the DEEM™ software.

Table 3. Summary of Source data and DEEM™ inputs for Acute Dietary Exposure Assessment[1]

Commodity	Designation[2]	%CT[3] (max)	SUMMARY OF DATA[4]						RDF	POINT ESTIMATE (ppm)
			commodity/source/yrs	Total	Imported	Detects	Range (det)	½ LOD (avg)	Det / ½ LOD / zeros	
almond	PB	30	field trial data	23	0	8	< 0.01	---	3 / 0 / 7	
apples	NB	10	apples/PDP/93-96	2554	118	32	0.003-0.33	0.002614	992 / 6925 / 71257	
apples	PB	10	apples/PDP/93-96	2554	118	32	0.003-0.33	0.002614	32 / 223 / 2299	
apples	B	na	apples/PDP/93-96	2554	118	32	0.003-0.33	0.002614	32 / 2522 / 0	
apples-juice	PB	33	apple juice/PDP/96-98	1554	448	0	na	0.002549	0 / 33 / 67	
apricot	NB	79	peach-fresh/PDP/94-96	1087	366	65	0.003-0.16	0.003269	998 / 6846 / 2085	
apricot	PB	68	peach-can/PDP/97	754	11	0	na	0.00347	0 / 68 / 32	
apricot	B	na	peach-fresh/PDP/97	1087	366	65	0.003-0.16	0.003269	65 / 1022 / 0	
banana	NB/PB/B	100	banana/PDP/94-95	640	640	0	na	0.0028	na	0.0028
beets-garden-roots	NB/PB	53	beets-garden-roots/FDA/92-97	166	0	0	na	0.0015	0 / 53 / 47	
beets-garden-tops	PB	53	spinach-fresh/PDP/95-97	1638	46	41	0.003-0.45	0.003645	40 / 680 / 638	
black berry/black berry juice	PB	23	black berry + raspberry/FDA/92-98	192	0	3	0.0005-0.033	0.0015	3 / 41 / 148	
blueberries	PB	11	blueberries/FDA/92-98	247	0	0	na	0.0015	0 / 11 / 89	
bok choy	PB	100	bok choy/FDA/92-98	98	0	2	0.04-0.1	0.0015	2 / 96 / 0	
broccoli	NB/PB	21	broccoli/PDP/94	634	15	0	na	0.0028	0 / 21 / 79	
Brussels sprouts	PB	100	broccoli/PDP/94	634	15	0	na	0.0028	na	0.0028
cabbage	NB	17	cabbage/FDA/92-98	532	0	1	0.33	0.0015	1 / 89 / 442	
cabbage	PB	31	cabbage/FDA/92-98	532	0	1	0.11	0.0015	1 / 164 / 367	
cabbage-savoy	NB	17	cabbage/FDA/92-98	532	0	1	0.33	0.0015	1 / 89 / 442	
cantaloupe	NB/PB	18	cantaloupe/FDA/92-98	414	0	3	0.02-0.03	0.0015	3 / 72 / 339	
carrots	NB	20	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	998 / 4541 / 22156	
carrots	PB	20	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	68 / 309 / 1510	
cauliflower	NB/PB	31	cauliflower/FDA/92-98	269	0	0	na	0.0015	0 / 31 / 69	
celery	NB	15	celery/PDP/93-94	810	15	69	0.005-0.3	0.0028	997 / 759 / 9948	
celery	PB	15	celery/PDP/93-94	810	15	69	0.005-0.3	0.0028	69 / 52 / 688	
cherries	PB	29	cherries/FDA/92-98	445	0	29	0.0015-0.06	0.0015	29 / 100 / 316	
coffee	B	100	tolerance for coffee bean	na	na	na	na	na	na	0.2
collard	PB	28	collards+kale+mustard green/FDA	355	0	7	0.005-0.83	0.0015	7 / 92 / 256	
cottonseed	B	1	tolerance for cottonseed	na	na	na	na	na	na	0.002
cranberries	PB	73	field trial data	na	na	8	0.03-0.19	---	8 / 0 / 3	
cucumber	NB	7	cucumbers/FDA/92-98	451	0	1	0.088	0.0015	1 / 31 / 419	
cucumber	PB (proc)	12	cucumbers/FDA/92-98	451	0	1	0.088	0.0015	1 / 53 / 397	
dandelion-green	PB	100	spinach/PDP/95-97	1638	46	41	0.003-0.45	0.003645	40 / 680 / 0	
endives-escarole	PB	100	endives-escarole/FDA/92-98	144	0	4	0.02-0.16	0.0015	4 / 140 / 0	
figs	NB	26	field trial data	na	na	6	0.17-0.39	---	6 / 0 / 17	
filberts	PB	12	field trial data	na	na	---	0.003-0.01	0.003-0.01	4 / 0 / 29	
garlic	NB/PB	11	dry-bulb onions/FDA/92-98	248	0	2	0.005-0.01	0.0015	2 / 38 / 324	
ginseng	PB	100	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	68 / 309 / 0	
grape juice	PB	7	grape-juice/PDP/98	665	41	0	na	0.002647	0 / 7 / 93	
grapefruit	NB	4	oranges/PDP/94-96	1892	23	0	na	0.003091	0 / 4 / 96	

Commodity	Designation[2]	%CT[3] (max)	SUMMARY OF DATA[4]						RDF	POINT ESTIMATE (ppm)
			commodity/source/yrs	Total	Imported	Detects	Range (det)	½ LOD (avg)	Det / ½ LOD / zeros	
grapefruit juice	PB	40	orange juice/PDP/97-98	1392	532	0	na	0.003684	0 / 40 / 60	
grapefruit peel	PB	4	citrus tolerance (0.7 ppm)	---	---	---	---	---	4 / 0 / 96	
grapes	PB	52	grapes/PDP/94-96	1884	912	29	0.005-0.15	0.002592	29 / 951 / 904	
green beans-canned	PB	8	green beans-canned/PDP/96-98	854	---	0	---	0.0027	0 / 26 / 828	
green beans-fresh	PB	3	green beans-fresh/PDP/94-95	1178	---	5	0.005-1.1	0.0033	5 / 30 / 1143	
green beans-frozen	PB	8	green beans-frozen/PDP/96-98	743	---	11	0.003-0.019	0.0026	11 / 22 / 721	
honeydew	NB/PB	10	cantaloupe/FDA/92-98	414	0	3	0.02-0.03	0.0015	3 / 38 / 373	
hops	B	---	field trial data	na	na	30	<0.05-0.49	---	na	0.096
kale	PB	1	collards+kale+mustard green/FDA	355	0	7	0.005-0.83	0.0015	7 / 0 / 693	
kiwi fruit	NB/PB	100	kiwi fruit/FDA/92-98	128	0	0	na	0.0015	na	0.0015
kohlrabi	NB	100	cauliflower/FDA/92-98	269	0	0	na	0.0015	na	0.0015
lemon/lime peel	PB	1	citrus tolerance (0.7 ppm)	---	---	---	---	---	1 / 0 / 99	
lettuce-head	NB	39	lettuce/PDP/94	691	2	27	0.005-0.16	0.002478	998 / 8963 / 15580	
lettuce-leafy	PB	68	lettuce/PDP/94	691	2	27	0.005-0.16	0.002478	27 / 443 / 221	
lettuce-unspecified	PB	52	lettuce/PDP/94	691	2	27	0.005-0.16	0.002478	27 / 332 / 332	
mushrooms	PB	100	field trial data	na	na	13	0.07-0.17	---	13 / 0 / 0	
mustard green	PB	39	collards+kale+mustard green/FDA	355	0	7	0.005-0.83	0.0015	7 / 131 / 216	
nectarines	NB	100	peach-fresh/PDP/94-96	1087	366	65	0.003-0.16	0.003269	997 / 6847 / 0	
onions-dry	B	na	dry-bulb onions/FDA/92-98	248	0	2	0.005-0.01	0.0015	2 / 38 / 208	
onions-dry	NB/PB	16	dry-bulb onions/FDA/92-98	248	0	2	0.005-0.01	0.0015	2 / 38 / 208	
onions-green	NB/PB	23	green onions/FDA/92-98	100	0	0	na	0.0015	0 / 23 / 77	
orange-juice	PB	40	orange-juice/PDP/97-98	1392	532	0	na	0.003684	0 / 40 / 60	
oranges	NB/PB	3	oranges/PDP/94-96	1892	23	0	na	0.003091	0 / 3 / 97	
orange peel	PB	3	citrus tolerance (0.7 ppm)	---	---	---	---	---	3 / 0 / 97	
other cane berries[5]	PB	45	blackberry + raspberry/FDA/92-98	192	0	3	0.0005-0.033	0.0015	3 / 83 / 106	
other citrus[6]	NB/PB	1	orange/PDP/94-96	1892	23	0	na	0.003091	0 / 1 / 99	
parsley	PB	8	spinach/PDP/95-97	1638	46	41	0.003-0.45	0.003645	40 / 680 / 8280	
parsnips	NB	100	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	996 / 4543 / 0	
peach	NB	47	peach-fresh/PDP/94-96	1087	366	65	0.003-0.16	0.003269	998 / 6846 / 8846	
peach	PB	20	peach-can/PDP/97	754	11	0	na	0.003471	0 / 20 / 80	
peach-dried	B	na	peach-fresh/PDP/94-96	1087	366	65	0.003-0.16	0.003269	65 / 1022 / 0	
pear	NB	24	pear,single-serving/PDP/7-98--6-99	645	43	6	0.003-0.084	0.003	6 / 149 / 490	
pear	PB	31	pear/PDP/96-98	1420	217	37	0.003-0.094	0.003	37 / 403 / 980	
pear	B	na	pear/PDP/96-98	1420	217	37	0.003-0.094	0.003	37 / 1383 / 0	
pepper-chilli, jalapeno	NB	1	green pepper/FDA/92-98	83	0	8	0.005-0.251	0.0015	8 / 0 / 792	
pepper-chilli, jalapeno	PB	1	green pepper/FDA/92-98	83	0	8	0.005-0.251	0.0015	8 / 0 / 792	
pepper-green	NB	19	green pepper/FDA/92-98	397	0	8	0.01-0.05	0.0015	8 / 67 / 322	
pepper-green	PB	19	green pepper/FDA/92-98	397	0	8	0.01-0.5	0.0015	8 / 67 / 322	
pineapples	NB/PB	100	field trial data	na	na	15	0.011-0.082	---	15 / 0 / 0	
pineapples	B	na	---	na	na	na	na	---	na	0.035
plums	NB	54	plums/FDA/92-98	112	0	0	na	0.0015	0 / 54 / 46	
potato	NB/PB	1	potatoes/PDP/94-95	1401	---	0	na	0.0023	0 / 14 / 1387	
potato	B	1	potatoes/PDP/94-95	1401	---	0	------	0.0023	na	0.000023
radicchio	NB	100	lettuce/PDP/94	691	2	27	0.005-0.16	0.002478	998 / 8963 / 0	

Commodity	Designation[2]	%CT[3] (max)	SUMMARY OF DATA[4]						RDF	POINT ESTIMATE (ppm)
			commodity/source/yrs	Total	Imported	Detects	Range (det)	½ LOD (avg)	Det / ½ LOD / zeros	
radishes-oriental	NB	100	radish-oriental/FDA/92-98	142	---	1	0.038	0.0015	1 / 141 / 0	
radishes-roots	PB	7	radish-root/FDA/92-98	121	0	1	0.038	0.0015	1 / 7 / 113	
raspberry	PB	45	raspberry/FDA/92-98	139	0	2	0.005-0.033	0.0015	2 / 60 / 77	
rutabagas	NB	100	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	998 / 4541 / 0	
sheep-fat	na	100	dermal treatment studies							2.2
sheep-kidney	na	100	dermal treatment studies							0.45
sheep-lean	na	100	dermal treatment studies							0.13
sheep-liver	na	100	dermal treatment studies							0.005
sheep-meat byproducts	na	100	dermal treatment studies							0.45
sheep-other organ meats	na	100	dermal treatment studies							0.45
sorghum	B	1	wheat/PDP/95-97	1563	---	24	---	0.0032	24 / 1539 / 0	
spinach-can	PB	60	spinach-can/PDP/97-98	863	1	0	na	0.003978	0 / 60 / 40	
spinach-fresh	PB	44	spinach-fresh/PDP/95-97	1638	46	41	0.003-0.45	0.003645	40 / 680 / 918	
squash-summer	NB	9	summer squash/FDA/92-98	514	0	1	0.11	0.0015	1 / 45 / 468	
squash-summer	PB	9	summer squash/FDA/92-98	514	0	1	0.11	0.0015	1 / 45 / 468	
squash-winter	NB	42	winter squash/PDP/97-98	969	349	2	0.003-0.007	0.0025	2 / 405 / 562	
strawberries	PB	16	strawberries/PDP/98	610	-----	9	0.003-0.03	0.0034	9 / 89 / 512	
sugar beets	B	na	beets-garden-roots/FDA/92-97	166	0	0	na	0.0015	na	0.0015
sugar beets molasses	B	6	beets-garden-roots/FDA/92-97	166	0	0	na	0.0015	na	0.00009
sweet corn	NB/PB	13	sweet corn/FDA/92-98	793	0	3	0.005-0.049	0.0015	3 / 100 / 690	
sweet corn-canned	PB	13	sweet corn-can/PDP/94-96	652	0	0	---	0.0021	0 / 85 / 567	
sweet corn-frozen	PB	13	sweet corn-frozen/PDP/94-96	653	0	0	---	0.0021	0 / 83 / 552	
sweet peas-canned	PB	8	sweet peas-fresh/FDA/94-96	746	0	0	----	0.0026	0 / 37 / 709	
sweet peas-fresh	PB	8	sweet peas-fresh/FDA/92-98	540	0	13	0.01-0.81	0.0015	13 / 30 / 497	
sweet peas-frozen	PB	8	sweet peas-frozen/PDP/94-96	703	---	10	0.005-0.049	0.0025	10 / 25 / 668	
sweet potato	NB/PB	13	sweet potato/PDP/96-98	1558	---	3	-----	0.0023	3 / 200 / 1355	
Swiss chard	NB	100	celery/PDP/93-94	810	15	64	0.005-0.3	0.0028	997 / 759 / 0	
tomato	NB	38	tomato/PDP/96-98	1597	----	10	0.025-0.75	0.0026	10 / 597 / 990	
tomato	PB	38	tomato/PDP/96-98	1597	----	10	0.003-0.09	0.0026	10 / 597 / 990	
tomato	B (not proc)	na	tomato/PDP/96-98	1597	----	10	0.003-0.09	0.0026	10 / 1587 / 0	
tomato	PB (proc)	21	tomato/PDP/96-98	1597	----	10	0.003-0.09	0.0026	10 / 325 / 1262	0.000637
turnip-roots	NB	100	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	996 / 4543 / 0	
turnip-tops	PB	100	spinach-fresh/PDP/95-97	1638	46	41	0.003-0.45	0.003645	40 / 680 / 0	
walnuts	PB	14	field trial data	na	na	---	<0.01	0.005	na	0.0007
watercress	PB	100	field trial data	na	na	1	0.025	---	na	0.025
watermelon	NB/PB	5	watermelon/FDA/92-98	415	0	1	0.002	0.0015	1 / 20 / 394	

1. DEEM inputs for acute analysis were either residue distribution files (RDFs) or a point estimate. Each commodity, the assumptions and detailed procedures for estimation of inputs is listed in the following sections, according to crop groups.

2. For purposes of acute dietary exposure assessment: B=blended, PB=partially blended, NB=not blended; proc=processed

3. Percent crop treated (%CT) is based on the maximum estimated %CT as reported in the attached BEAD report of 1/29/99. For those instances in which the source data contained a significant contribution of imported samples, the %CT was adjusted by assuming that 100% of all imported samples had been treated. If usage data were not available for a crop, then 100%CT was assumed. If less than 1%CT was reported, then a minimum of 1%CT was assumed.

4. Total=total samples reported; Imports=number of imported samples reported; Detects=number of samples containing residues of diazinon greater than the appropriate limit of detection of the analysis; ½ LOD= the average of ½ the limits of detection for samples analyzed, which is an estimate of residue level in samples assumed to originate from crops that have been treated with diazinon, but with nondetectable residues.

5. Other caneberries include boysenberries, dewberries, loganberries, and youngberries.

6. Other citrus include lemons, limes, tangerines, tangelos, kumquats, and citron.

Table 4 - Summary of Source data and DEEM™ inputs for Chronic Dietary Exposure Assessment[1]

Commodity	%CT[2] (Avg)	SUMMARY OF DATA[3]						Point Estimate (PPM)
		commodity/source/yrs	**Total**	**Imp**	**Det**	**Range (det)**	**½ LOD (avg)**	**Chronic**
almond	20	field trial data	23	0	8	< 0.01	---	0.001
apples	4	apples/PDP/93-96	2554	118	32	0.003-0.33	0.002614	0.000542
apples-juice	32	apple juice/PDP/96-98	1554	448	0	na	0.002549	0.000816
apricot (foods derived from fresh fruit)	68	peach-fresh/PDP/94-96	1087	366	65	0.003-0.16	0.003269	0.003371
apricot (canned)	52	peach-can/PDP/97	754	11	0	na	0.00347	0.00181
banana	100	banana/PDP/94-95	640	640	0	0	0.0028	0.0028
beets-garden-roots	35	beets-garden-roots/FDA/92-97	166	0	0	na	0.0015	0.000525
beets-garden-tops	35	spinach-fresh/PDP/95-97	1638	46	41	0.003-0.45	0.003645	0.00287
blackberry/blackberry juice	18	blackberry+ raspberry/FDA/92-98	192	0	3	0.0005-0.033	0.0015	0.000205
blueberries	6	blueberries/FDA/92-98	247	0	0	na	0.0015	0.00009
bok choy	100	bok choy/FDA/92-98	98	0	2	0.04-0.1	0.0015	0.0029
broccoli	11	broccoli/PDP/94	634	15	0	na	0.0028	0.00031
Brussels sprouts	90	broccoli/PDP/94	634	15	0	na	0.0028	0.0025
cabbage (fresh)	11	cabbage/FDA/92-98	532	0	1	0.33	0.0015	0.00037
cabbage (processed)	13	cabbage/FDA/92-98	532	0	1	0.33	0.0015	0.0004
cabbage-savoy	11	cabbage/FDA/92-98	532	0	1	0.33	0.0015	0.00037
cantaloupe (Persian melon, casabas, crenshaws, balsam pear,bittermelon, & wintermelon)	12	cantaloupe/FDA/92-98	414	0	3	0.02-0.03	0.0015	0.00034
carrots	10	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	0.00065
cauliflower	16	cauliflower/FDA/92-98	269	0	0	na	0.0015	0.00024
celery	10	celery/PDP/93-94	810	15	69	0.005-0.3	0.0028	0.00417
cherries (fruit & juice)	17	cherries/FDA/92-98	445	0	29	0.0015-0.06	0.0015	0.00105
coffee	100	tolerance for coffee bean	na	na	na	na	na	0.2
collard	19	collards+kale+mustard green/ FDA92-98	355	0	7	0.005-0.83	0.0015	0.00439
cottonseed	1	tolerance for cottonseed	na	na	na	na	na	0.002

Commodity	%CT[2] (Avg)	SUMMARY OF DATA[3]						Point Estimate (PPM)
		commodity/source/yrs	**Total**	**Imp**	**Det**	**Range (det)**	**½ LOD (avg)**	**Chronic**
cranberries	48	field trial data	8	na	8	0.03-0.19	---	0.0435
cucumber(uncooked)	4	cucumbers/FDA/92-98	451	0	1	0.088	0.0015	0.00025
cucumber (canned)	5	cucumbers/FDA/92-98	451	0	1	0.088	0.0015	0.00027
dandelion-green	100	spinach/PDP/95-97	1638	46	41	0.003-0.45	0.003645	0.008215
endives-escarole	100	endives-escarole/FDA/92-98	144	0	4	0.02-0.16	0.0015	0.00361
figs	17	field trial data	na	na	6	0.17-0.39	---	0.048
filberts	6	field trial data	4	na	---	0.003-0.01	0.003-0.01	0.00044
garlic	8	dry-bulb onions/FDA/92-98	248	0	2	0.005-0.01	0.0015	0.00016
ginseng	100	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	0.00591
grapes	50	grapes/PDP/94-96	1884	912	29	0.005-0.15	0.0001	0.001579
grape juice	3	grape-juice/PDP/98	665	41	0	na	0.002647	0.0000794
grapefruit	2	oranges/PDP/94-96	1892	23	0	na	0.003091	0.000062
grapefruit juice	39	orange juice/PDP/97-98	1392	532	0	na	0.003684	0.001437
grapefruit peel	2	used citrus tolerance (0.7 ppm)	--	--	--	--	--	0.0014
green beans (canned)	1	green beans-canned/PDP/96-98	854	---	0	---	0.0001	0.0001
green beans (fresh)	4	green beans-fresh/PDP/94-95	1178	---	5	0.005-1.1	0.0012	0.0012
green beans (frozen)	4	green beans-frozen/PDP/96-98	743	---	11	0.003-0.019	0.0002	0.0002
honeydew	5	cantaloupe/FDA/92-98	414	0	3	0.02-0.03	0.0015	0.00023
hops	63	field trial data	30	na	16	<0.05-0.49	0.025	0.072
kale	20	collards+kale+mustard green/ FDA/92-98	355	0	7	0.005-0.83	0.0015	0.00441
kiwi fruit	100	kiwi fruit/FDA/92-98	128	0	0	na	0.0015	0.0015
kohlrabi	100	cauliflower/FDA/92-98	269	0	0	na	0.0015	0.0015
lettuce-head	28	lettuce/PDP/94	691	2	27	0.005-0.16	0.002478	0.00126
lettuce-leafy	45	lettuce/PDP/94	691	2	27	0.005-0.16	0.002478	0.00168
lettuce-unspecified	32	lettuce/PDP/94	691	2	27	0.005-0.16	0.002478	0.00136
mushrooms	100	field trial data	13	na	13	0.07-0.17	---	0.121
mustard green	1	collards+kale+mustard green/ FDA/92-98	355	0	7	0.005-0.83	0.0015	0.0021
nectarines	70	peach-fresh/PDP/94-96	1087	366	65	0.003-0.16	0.003269	0.003
onions-dry	11	dry-bulb onions/FDA/92-98	248	0	2	0.005-0.01	0.0015	0.00021
onions-green	8	green onions/FDA/92-98	100	0	0	na	0.0015	0.00012

Commodity	%CT[2] (Avg)	SUMMARY OF DATA[3]						Point Estimate (PPM)
		commodity/source/yrs	**Total**	**Imp**	**Det**	**Range (det)**	**½ LOD (avg)**	**Chronic**
orange-juice	39	orange-juice/PDP/97-98	1392	532	0	na	0.003684	0.00144
oranges	1	oranges/PDP/94-96	1892	23	0	na	0.003091	0.000031
orange-peel	1	use citrus tolerance (0.7 ppm)	--	--	--	--	--	0.007
other caneberries[4]	45	blackberry + raspberry/FDA/92-98	192	0	3	0.0005-0.033	0.0015	0.00024
other citrus peel[5]	1	used citrus tolerance (0.7 ppm)	--	--	--	--	--	0.007
other citrus	1	orange/PDP/94-96	1892	23	0	na	0.003091	0.000031
parsley	4	spinach/PDP/95-97	1638	46	41	0.003-0.45	0.003645	0.000328
parsnips	100	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	0.00591
peach (fresh, cooked, dried, juice)	42	peach-fresh/PDP/94-96	1087	366	65	0.003-0.16	0.003269	0.0021
peach (canned/frozen)	12	peach-can/PDP/97	754	11	0	na	0.003471	0.000416
pear (fruit & juice)	24	pear/PDP/96-98	1420	217	37	0.003-0.094	0.003	0.001068
pepper-chilli, jalapeno	1	green pepper/FDA/92-98	397	---	8	0.005-0.251	0.0015	0.00086
pepper-green, other & pimiento	8	green pepper/FDA/92-98	397	---	8	0.01-0.05	0.0015	0.0017
pineapples	100	field trial data	na	na	15	0.011-0.082	---	0.035
plums	39	plums/FDA/92-98	112	0	0	na	0.0015	0.000585
potato	1	potatoes/PDP/94-95	1401	---	0	------	0.0023	0.000023
radicchio	100	lettuce/PDP/94	691	2	27	0.005-0.16	0.002478	0.00031
radishes-oriental	100	radish-root &oriental/FDA/92-98	142	---	1	0.038	0.0015	0.00176
radishes-roots	4	radish-root/FDA/92-98	121	0	1	0.038	0.0015	0.0003636
raspberry	25	raspberry/FDA/92-98	139	0	2	0.005-0.033	0.0015	0.000630
rutabagas	100	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	0.00591
sheep-fat	37	dermal treatment studies						2.2
sheep-kidney	37	dermal treatment studies						0.45
sheep-lean	37	dermal treatment studies						0.13
sheep-liver	37	dermal treatment studies						0.005
sheep-meat byproducts	37	dermal treatment studies						0.45
sheep-other organ meats	37	dermal treatment studies						0.45
sorghum	1	wheat/PDP/95-97	1563	---	24	---	0.0032	0.0002
spinach-canned	24	spinach-can/PDP/97-98	863	1	0	na	0.003978	0.000955
spinach-fresh	22	spinach-fresh/PDP/95-97	1638	46	41	0.003-0.45	0.003645	0.0018

Commodity	%CT[2] (Avg)	SUMMARY OF DATA[3]						Point Estimate (PPM)
		commodity/source/yrs	**Total**	**Imp**	**Det**	**Range (det)**	**½ LOD (avg)**	**Chronic**
squash-summer	4	summer squash/FDA/92-98	514	0	1	0.11	0.0015	0.00027
squash-winter	39	winter squash/PDP/97-98	969	349	2	0.003-0.007	0.0025	0.0006
strawberries	9	strawberries/PDP/98	610	-----	9	0.003-0.03	0.0034	0.00039
sugar beets/molasses	2	beets-garden-roots/FDA/92-98	166	0	0	na	0.0015	0.00003
sweet corn	9	sweet corn/FDA/92-98	793	---	3	0.005-0.049	0.0015	0.0002
sweet corn-canned	9	sweet corn-can/PDP/94-96	652	---	0	---	0.0021	0.00019
sweet corn-frozen	9	sweet corn-frozen/PDP/94-96	635	---	0	---	0.0021	0.000019
sweet peas-canned	1	sweet peas-fresh/FDA/94-96	746	---	0	----	0.0026	0.000024
sweet peas-fresh	4	sweet peas-fresh/FDA/92-98	540	0	13	0.01-0.81	0.0015	0.0022
sweet peas-frozen	1	sweet peas-frozen/PDP/94-96	703	---	10	0.005-0.049	0.0025	0.000246
sweet potato	9	sweet potato/PDP/96-98	1558	---	3	-----	0.0023	0.00021
Swiss chard	100	celery/PDP/93-94	810	15	64	0.005-0.3	0.0028	0.00417
tomato (fresh/dried)	36	tomato/PDP/96-98	1597	533	10	0.003-0.09	0.0026	0.00103
tomato (processed)	9	tomato/PDP/96-98	1597	----	10	0.003-0.09	0.0026	0.000327
turnip-roots	100	carrots/PDP/94-96	1887	98	68	0.003-0.086	0.00324	0.00591
turnip-tops	100	spinach-fresh/PDP/95-97	1638	46	41	0.003-0.45	0.003645	0.008215
walnuts	7	field trial data	na	na	---	<0.01	0.005	0.00035
watercress	100	field trial data	na	na	1	0.025	---	0.025
watermelon	2	watermelon/FDA/92-98	415	0	1	0.002	0.0015	0.00003

1. DEEM inputs for chronic analysis were based on average residues in composite samples adjusted for percent crop treated. Each commodity, the assumptions and detailed procedures for estimation of inputs is listed in the following sections, according to crop groups.

2. Percent crop treated (%CT) is based on the average %CT as reported in the attached BEAD report of 1/29/99. For those instances in which the source data contained a significant contribution of imported samples, the %CT was adjusted by assuming that 100% of all imported samples had been treated. If the usage data were not available for a crop, then 100% CT was assumed. If less than 1%CT was reported, then a minimum of 1%CT was assumed.

3. Total=total samples reported; Imp=number of imported samples reported; Det=number of samples containing residues of diazinon greater than the appropriate limit of detection of the analysis; ½ LOD=the average of ½ the limits of detection for samples analyzed, which is an estimate of the residue level in samples assumed to originate from crops that had been treated but contained non-detectable residues.

4. Other caneberries include boysenberries, dewberries, loganberries, and youngberries.

5. Other citrus include lemons, limes, tangerines, tangelos, kumquats, and citron.

ROOT AND TUBER VEGETABLE GROUP

Beets-Garden-Roots (NB, PB)

Acute dietary exposure- No PDP data were available for beets-garden-roots. FDA analyzed 166 samples between 1992 and 1997. No detects were found (½ LOD = 0.0015 ppm). Using 53% CT, the RDF contained 47 zeros and 53 repeated ½ LOD values at 0.0015 ppm). The RDF was used for both not-blended and partially-blended food forms of beets-garden-roots.

Chronic dietary exposure- The value of 0.000525 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 65 zeros and 35 repeated ½ LOD values at 0.0015 ppm; an average 35%CT (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Carrots (NB, PB)

Acute dietary exposure- The 1994-1996 PDP data for carrots were used (total number of samples = 1887; number of samples from imports = 98; total number of detects = 68; number of detects from imports = 3 ; range of detected residues = 0.003-0.086 ppm, weighted average ½ LOD = 0.00324). An estimated maximum of 20%CT according to the 1999 BEAD report was incorporated into the RDF. For not-blended food form of carrots, the detected residue data were decomposited to, initially, 1000 residue values which after truncation at tolerance (0.75 ppm) totaled 998 (range of generated values = 0.001- 0.6278 ppm with n = 29). The RDF for not-blended food forms contained 998 (generated) detects, 22156 zeros, and 4541 repeated ½ LOD values at 0.00324 ppm. The RDF for partially-blended food forms of carrots contained 68 detects, 1510 zeros, and 309 repeated ½ LOD values at 0.00324 ppm.

Chronic dietary exposure- The calculated average value of 0.00065 ppm based on average of 68 detects, 1698 zeros and 121 repeated ½ LOD values of 0.00324 ppm was used for the chronic exposure assessment. The average % CT of 10% was used to calculate the number of ½ LOD values.

Ginseng (PB)

Acute dietary exposure- No PDP data were available for ginseng. FDA analyzed 2 samples in 1993 and both contained detectable residues (0.029 ppm, 0.036 ppm). However, since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. Therefore, the 1994-1996 PDP data for carrots were translated to ginseng per HED SOP 99.3 (total number of samples = 1887; number of samples from imports = 98; total number of detects = 68; number of detects from imports = 3; range of detected residues = 0.003 -0.086 ppm, weighted average½ LOD = 0.00324). Because there was no information on % CT from BEAD, it was assumed that ginseng is 100% treated. Consequently, the RDF contained 68 detects and 309 repeated ½ LOD values at 0.00324 ppm.

Chronic dietary exposure- The calculated average residue value of 0.00591 ppm was used for the residue input in chronic dietary exposure assessment of ginseng. This value was the average of 68 detects, and 309 repeated ½ LOD values at 0.00324 ppm; the assumption of 100 % CT value was also used to calculate the number of ½ LOD values.

Parsnips (NB)

Acute dietary exposure- No PDP data were available for parsnips. FDA analyzed 11 samples between 1992 and 1997; 3 detectable residues (0.01 ppm, 0.01 ppm, 0.03 ppm) were found. However, since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. Therefore, the 1994-1996 PDP data for carrots were translated to parsnips per HED SOP 99.3 (total number of samples = 1887; number of samples from imports = 98; total number of detects = 68; number of detects from imports = 3 ; range of detected residues = 0.003 -0.086 ppm, weighted average½ LOD = 0.00324). Because there was no information on % CT from BEAD, it was assumed that parsnips is 100% treated. Since parsnips is considered a not-blended commodity, the decomposited data for carrots were used for parsnips (n = 29), however, the generated residue values were truncated at tolerance for parsnips, 0.5 ppm. Consequently, the RDF contained 996 (generated) detects and 4543 repeated ½ LOD values at 0.00324 ppm. (Note: Since as a result of truncation of generated residue values at 0.5 ppm, the number of generated residue values reduced by 2 from carrot data, 2 values of ½ LOD were added to the number of ½ LOD values so that the total number of expected treated samples; i.e. detects + ½ LOD, be equal to that of carrots.)

Chronic dietary exposure- The calculated average residue value of 0.00591 ppm was used for the residue input in chronic dietary exposure assessment of parsnips. This value was the average of 68 detects, and 309 repeated ½ LOD values at 0.00324 ppm; the assumption of 100 % CT value was also used to calculate the number of ½ LOD values.

Potato (B, NB, PB)

Acute dietary exposure- The 1994-95 PDP data for potatoes were used (total number of samples= 1401; total number of detects=0, and a weighted average½ LOD= 0.0023). The estimated 1%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for not-blended/partially-blended contained 1387 zeros and 14 repeated ½ LOD values at 0.0023 ppm. For dried potatoes, which are blended, a point estimate = ½ LOD = 0.000023 ppm is used.

Chronic dietary exposure- The average value of 0.000023 ppm was used for the residue input in chronic dietary exposure assessment for potatoes. This value was the average of 1387 zeros and 14 repeated ½ LOD values. A weighted average 1%CT was used to estimate the number of ½ LOD values.

Radishes-Roots (PB)

Acute dietary exposure- No PDP data were available for radishes. FDA analyzed 121 samples of radishes-roots between 1992 and 1998; only 1 detectable residue (0.038 ppm) was found. Using 7% CT as the maximum % CT estimate from BEAD (1999 report), the RDF was constructed; it contained 1 detect, 113 zeros, and 7 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The calculated average residue value of 0.0003636 ppm was used for the residue input in chronic dietary exposure assessment of radishes-roots. This value was the average of 1 detect (0.038 ppm), 116 zeros and 4 repeated ½ LOD values at 0.0015 ppm; an average 4% CT (according to BEAD 1999 report) was used to calculate the number of ½ LOD values.

Radish-Oriental (NB)
Acute dietary exposure- The 1992-98 FDA data for radish (including radish oriental) were used (total number of samples= 142; total number of detects=1, and ½ LOD= 0.0015). Because there was no information available from BEAD regarding the percentage of treated oriental radish, 100%CT was assumed. The RDF for not-blended contained 1 detected residue (0.038 ppm) and 141 repeated ½ LOD (0.0015 ppm).

Chronic dietary exposure- The average value of 0.00176 ppm was used for the residue input in chronic dietary exposure assessment for oriental radish. This value was the average of 1 detected residue, 141 repeated ½ LOD value. A weighted average 100%CT was used to estimate the number of ½ LOD values.

Rutabagas (NB)
Acute dietary exposure- No PDP data were available for rutabagas. FDA analyzed 16 samples between 1992 and 1997; no detectable residues were found. However, since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. Therefore, the 1994-1996 PDP data for carrots were translated to rutabagas per HED SOP 99.3 (total number of samples = 1887; number of samples from imports = 98; total number of detects = 68; number of detects from imports = 3 ; range of detected residues = 0.003 -0.086 ppm, weighted average½ LOD = 0.00324). Because there was no information on % CT from BEAD, it was assumed that rutabagas is 100% treated. Since rutabagas is considered a not-blended commodity, the decomposited data for carrots were used for rutabagas (n = 29). Since the tolerance of rutabagas is the same as that of carrots (0.75 ppm) no further truncation of the generated residue values of carrots were necessary. Consequently, the RDF contained 998 (generated) detects and 4541 repeated ½ LOD values at 0.00324 ppm.

Chronic dietary exposure- The calculated average residue value of 0.00591 ppm was used for the residue input in chronic dietary exposure assessment of rutabagas. This value was the average of 68 detects, and 309 repeated ½ LOD values at 0.00324 ppm; the assumption of 100 % CT value was used to calculate the number of ½ LOD values.

Sugar-Beet/Sugar-Beet-Molasses (B)
Acute dietary exposure- No PDP data were available for sugar beets. FDA (domestic surveillance) analyzed 62 samples between 1992 and 1998. However, since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. Consequently, the FDA data for garden beets were translated to sugar beets per HED SOP 99.3 (total number of samples = 166; number of detects = 0; ½ LOD = 0.0015 ppm). Since sugar beets is considered a blended commodity, the entire distribution of monitoring data without regard to % CT with replacing ½ LOD for all non-detects was used; this would be to have an RDF containing 100 repeated ½ LOD values at 0.0015 ppm or simply using 0.0015 ppm as a point estimate. Since sugar beet molasses is considered a blended processed commodity, a point estimate (0.00009 ppm) was used; this value (0.00009 ppm) was the product of 0.0015 ppm and 6% CT.

Chronic dietary exposure- The value of 0.00003 ppm was used for the residue input of both sugar beets and sugar beets molasses in chronic dietary exposure assessment. This value was the average of 98 zeros and 2 repeated ½ LOD values at 0.0015 ppm; the average %CT, 2% (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Sweet Potato (NB, PB)

Acute dietary exposure- The 1996-98 PDP data for sweet potatoes were used (total number of samples= 1558; total number of detects=3, and a weighted average½ LOD= 0.0023). The estimated 13%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for not-blended/partially-blended contained 3 detected residues (0.003-0.007 ppm), 1355 zeros and 200 repeated ½ LOD values at 0.0023 ppm.

Chronic dietary exposure- The average value of 0.00021 ppm was used for the residue input in chronic dietary exposure assessment for sweet potatoes. This value was the average of 3 detected residues, 1418 zeros and 137 repeated ½ LOD values. A weighted average 9%CT was used to estimate the number of ½ LOD values.

Turnips-Roots (NB)

Acute dietary exposure- No PDP data were available for turnips-roots. FDA analyzed 38 samples between 1992 and 1997; no detectable residues were found. However, since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. Therefore, the 1994-1996 PDP data for carrots were translated to turnips-roots per HED SOP 99.3 (total number of samples = 1887; number of samples from imports = 98; total number of detects = 68; number of detects from imports = 3; range of detected residues = 0.003 -0.086 ppm, weighted average½ LOD = 0.00324). Because there was no information on % CT from BEAD, it was assumed that turnips-roots is 100% treated. Since turnips-roots is considered a not-blended commodity, the decomposited data for carrots were used for turnips-roots (n = 29), however, the generated residue values were truncated at tolerance for turnip-roots, 0.5 ppm. Consequently, the RDF contained 996 (generated) detects and 4543 repeated ½ LOD values at 0.00324 ppm. (Note: Since as a result of truncation of generated residue values at 0.5 ppm, the number of generated residue values reduced by 2 from carrot data, 2 values of ½ LOD were added to the number of ½ LOD values so that the total number of expected treated samples; i.e. detects + ½ LOD, be equal to that of carrots.)

Chronic dietary exposure- The calculated average residue value of 0.00591 ppm was used for the residue input in chronic dietary exposure assessment of turnips-roots. This value was the average of 68 detects, and 309 repeated ½ LOD values at 0.00324 ppm; the assumption of 100 % CT value was used to calculate the number of ½ LOD values.

LEAVES OF ROOT AND TUBER VEGETABLES GROUP

Beets-Garden-Tops (PB)

Acute dietary exposure- No PDP data were available for beets-garden-tops. FDA analyzed only 13 samples between 1992 and 1997; with no detected residues found. However, since the total number of

samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. Data translation from turnips-tops, which belongs to the same crop group as beet-garden-tops, was considered, however not enough data were available for turnips-tops (PDP did not sample turnips, and FDA data contained only 64 samples). Consequently, data from spinach, which had the same use pattern, were translated to beets-garden-tops per HED SOP 99.3 (total number of samples = 1638; number of samples from imports = 46; total number of detects = 41 [including a detect from diazoxon]; number of detects from imports = 4; range of detected residues [adding a diazoxon residue to diazinon] = 0.003 - 0.45 ppm, weighted average ½ LOD = 0.003645 ppm). Because the number of import samples did not constitute a large portion of the total samples, the maximum %CT estimate for domestic samples, according to BEAD 1999 report (53% CT) was incorporated into the RDF. The RDF contained 40 detected residues [including one with residues of diazinon and diazoxon added together], 638 zeros, and 680 repeated ½ LOD values at 0.003645 ppm.

Chronic dietary exposure- The 1995-1997 PDP data for spinach-fresh was also used to calculate a residue estimate, 0.00287 ppm in chronic dietary exposure. This value was the average of 40 detected residues (sum = 1.791), 669 zeros, and 320 repeated ½ LOD values at 0.003645 ppm; an average 35%CT (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Turnip-tops (PB)

Acute dietary exposure- No PDP data were available for turnip-tops. FDA analyzed only 64 samples between 1992 and 1997; no detected residues found. Since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. Data translation from beet-garden-tops, which belongs to the same crop group as turnip-tops (crop group 2), was considered, however not enough data were available for beet-garden-tops (PDP did not sample beets-garden-tops, and FDA data contained only 13 samples). Consequently, data from spinach which had the same use pattern were translated to turnip-tops per HED SOP 99.3 (total number of samples = 1638; number of samples from imports = 46; total number of detects = 41 [including a detect from diazoxon]; number of detects from imports = 4; range of detected residues [adding a diazoxon residue to diazinon] = 0.003 - 0.45 ppm, weighted average½ LOD = 0.003645 ppm). Since the information on percentage of turnips that are treated were not available, 100% CT were assumed. The RDF contained 40 detected residues [including one with residues of diazinon and diazoxon added together], and 680 repeated ½ LOD values at 0.003645 ppm.

Chronic dietary exposure- The 1995-1997 PDP data for spinach-fresh was used to calculate a residue estimate (0.0082 ppm) in chronic dietary exposure assessment of turnip-tops. This value was the average of 40 detected residues (sum = 1.791 ppm), no zeros, and 320 repeated ½ LOD values at 0.003645 ppm; the 100 %CT in absence of the % CT information from BEAD was assumed.

BULB VEGETABLE GROUP

Garlic (NB, PB)

Acute dietary exposure- The 1992-98 FDA data for dry bulb onions (yellow/white) were translated to garlic. The estimated 11%CT value according to the 1999 BEAD report was incorporated into the RDF.

The RDF for dry bulb onion (16% CT) was adjusted to the assumption of 11% CT by adding zeroes to the file. Therefore, the garlic RDF for not-blended/partially-blended contained 2 detected residues (0.005-0.01 ppm), 324 zeros and 38 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The average value of 0.00016 ppm was used for the residue input in chronic dietary exposure assessment for garlic, using dry bulb onion data. This value was the average of 2 detected residues, 310 zeros and 25 repeated ½ LOD values. A weighted average 8%CT was used to estimate the number of ½ LOD values.

Onions (NB, PB, B)

Green Onions

Acute dietary exposure- The 1992-98 FDA data for green onions were used (total number of samples= 100; total number of detects=0, and ½ LOD= 0.0015). The estimated 23%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for not-blended/partially-blended contained 77 zeros and 23 repeated ½ LOD values at 0.0015 ppm. Green onions data were used for leeks.

Chronic dietary exposure- The average value of 0.00012 ppm was used for the residue input in chronic dietary exposure assessment for green onions and leeks. This value was the average of 92 zeros and 8 repeated ½ LOD values A weighted average 8%CT was used to estimate the number of ½ LOD values

Onions-dry bulb

Acute dietary exposure- The 1992-98 FDA data for dry bulb onions (yellow/white) were used (total number of samples= 248; total number of detects=2, and ½ LOD= 0.0015). The estimated maximum 16%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for not-blended/partially-blended contained 2 detected residues (0.005-0.01 ppm), 208 zeros and 38 repeated ½ LOD values at 0.0015 ppm. Onions-dry bulb data were also used for shallots.

The acute anticipated residue is 0.00029 ppm for onions-dehydrated or dried, which is a blended commodity. This value is the average of 2 detects, 208 zeroes and 38 repeated ½ LOD values at 0.0015 ppm

Chronic dietary exposure- The average value of 0.00021 ppm was used for the residue input in chronic dietary exposure assessment for onions dry-bulb, onions-dehydrated, and shallots. This value was the average of 2 detected residues, 221 zeros and 25 repeated ½ LOD values. A weighted average 11%CT was used to estimate the number of ½ LOD values.

LEAFY VEGETABLES (EXCEPT BRASSICA) GROUP

Celery (NB, PB)

Acute dietary exposure- For not-blended food forms of celery, the 1993-1994 PDP data were used (total number of samples = 810; number of samples from imports = 15; total number of detects = 69; number of detects from imports = 0 ; range of detected residues = 0.005 - 0.3 ppm, weighted average ½ LOD = 0.0028 ppm). Because the number of import samples did not constitute a large portion of the total

samples, the maximum %CT value of 15% for domestic samples were used. With the assumption that there are 3 bunches of medium-sized celery in a 5 lbs composite sample, the detected residue data were decomposited to, initially, 1000 residue values which after truncation at tolerance (0.7 ppm) totaled 997 (range of generated values = 0.0004- 0.67 ppm with n = 3). The RDF contained 997 generated detects, 9948 zeros, and 759 repeated ½ LOD values at 0.0028 ppm. For partially-blended food forms of celery, the 1993-1994 PDP data were also used. The RDF contained 69 detects, 688 zeros, and 52 repeated ½ LOD values at 0.0028 ppm.

Chronic dietary exposure- The average value of 0.00417 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 69 detects, 729 zeros and 12 repeated ½ LOD at 0.0028 ppm; an average 10%CT (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Dandelion-Greens (PB)

Acute dietary exposure- No PDP data were available for dandelion-green. FDA (domestic surveillance) analyzed only 1 sample in 1993; no residue was found. However, since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. Therefore, the 1995-1997 PDP data for spinach were translated to dandelion per HED SOP 99.3 (total number of samples = 1638; number of samples from imports = 46; total number of detects = 41 [including a detect from diazoxon]; number of detects from imports = 4; range of detected residues [adding a diazoxon residue to diazinon] = 0.003 - 0.45 ppm, weighted average½ LOD = 0.003645 ppm). Because there was no information regarding the percentage of treated dandelion available from BEAD, 100% CT was assumed. The RDF contained 40 detected residues [including one with residues of diazinon and diazoxon added together], and 680 repeated ½ LOD values at 0.003645 ppm.

Chronic dietary exposure- The calculated average value of 0.0082 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 40 detected residues (sum = 1.791 ppm), and 320 repeated ½ LOD values at 0.003645 ppm; 100% CT was used for the calculation of the number of ½ LOD values.

Endive-Curley and Escarole (PB)

Acute dietary exposure- No PDP data were available for endive and escarole. FDA (domestic surveillance) analyzed 144 sample between 1992 and 1998; 4 detected residues were found (0.03 ppm, 0.16 ppm, 0.02 ppm, 0.100 ppm). Because there was no information available from BEAD regarding the percentage of treated endive and escarole, 100% CT was assumed. The RDF contained 4 detected residues, and 140 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The calculated average value of 0.00361 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 4 detected residues, and 140 repeated ½ LOD values at 0.0015 ppm; 100% CT was used for the calculation of the number of ½ LOD values.

Lettuce-Head (NB)

Acute dietary exposure- The 1994 PDP data for fresh lettuce were used (total number of samples = 691; total number of detects = 27; range of detects = 0.005 - 0.16 ppm; number of samples from imports = 2; number of detects from imports = 0; weighted average½ LOD = 0.002478 ppm). The estimated 39%CT value according to the 1999 BEAD report was incorporated into the RDF. Since the head lettuce is considered to be a not-blended commodity, the detected residue data were decomposited to, initially, 1000 residue values which after truncation at tolerance (0.7 ppm) totaled 998 (range of generated values = 0 - 0.3526 ppm with n = 3). The RDF contained 998 (generated) detects, 15580 zeros, and 8963 repeated ½ LOD values at 0.002478 ppm.

Chronic dietary exposure- The calculated value of 0.001260 ppm was used for the chronic dietary exposure assessment. This value was the average of 27 detects in 1994 PDP data (sum of detects = 0.459 ppm), 498 zeros and 166 repeated ½ LOD values of 0.002478 ppm. The average % CT of 28% was used to calculate the number of ½ LOD values.

Lettuce-Leafy Varieties (PB)

Acute dietary exposure- The 1994 PDP data for fresh lettuce were used (total number of samples = 691; total number of detects = 27; range of detects = 0.005 - 0.16 ppm; number of samples from imports = 2; number of detects from imports = 0; weighted average½ LOD = 0.002478 ppm). The estimated 68%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF contained 27 detects, 221 zeros, and 443 repeated ½ LOD values at 0.002478 ppm.

Chronic dietary exposure- The calculated value of 0.00168 ppm was used for the chronic dietary exposure assessment. This value was the average of 27 detects in 1994 PDP data (sum of detects = 0.459 ppm), 380 zeros and 284 repeated ½ LOD values of 0.002478 ppm. The average % CT of 45% was used to calculate the number of ½ LOD values.

Lettuce-Unspecified (PB)

Acute dietary exposure- The 1994 PDP data for fresh lettuce were used (total number of samples = 691; total number of detects = 27; range of detects = 0.005 - 0.16 ppm; number of samples from imports = 2; number of detects from imports = 0; weighted average½ LOD = 0.002478 ppm). The estimated 52%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF contained 27 detects, 332 zeros, and 332 repeated ½ LOD values at 0.002478 ppm.

Chronic dietary exposure- The calculated value of 0.00136 ppm was used for the chronic dietary exposure assessment. This value was the average of 27 detects in 1994 PDP data (sum of detects = 0.459 ppm), 470 zeros and 194 repeated ½ LOD values of 0.002478 ppm. The average % CT of 32% was used to calculate the number of ½ LOD values.

Parsley (PB)

Acute dietary exposure- No PDP data were available for parsley. FDA (domestic surveillance) analyzed 27 samples between 1992 and 1998 (number of detected residues = 8; range of detects = 0.005 ppm - 0.620 ppm). However, since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. Therefore, the

1995-1997 PDP data for spinach were translated to parsley per HED SOP 99.3 (total number of samples = 1638; number of samples from imports = 46; total number of detects = 41 [including a detect from diazoxon]; number of detects from imports = 4; range of detected residues [adding a diazoxon residue to diazinon] = 0.003 - 0.45 ppm, weighted average½ LOD = 0.003645 ppm). Because the number of import samples did not constitute a large portion of the total samples, the maximum %CT estimate for domestic samples, according to BEAD 1999 report (8% CT) was incorporated into the RDF. The RDF contained 40 detected residues, 8280 zeros, and 680 repeated ½ LOD values at 0.003645 ppm.

Chronic dietary exposure- The calculated average value of 0.000328 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 40 detected residues (sum = 1.791), 8664 zeros, and 320 repeated ½ LOD values at 0.003645 ppm; an average 4%CT (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Radicchio (NB)

Acute dietary exposure- No PDP data were available for radicchio. FDA analyzed only 2 samples in 1992 and 1995 with no detected residues found. These data could not be used since the number of samples were not adequate. The 1994 PDP data for fresh lettuce were translated to radicchio (total number of samples for all types of lettuce = 691; total number of detects = 27; range of detects = 0.005 - 0.16 ppm; number of samples from imports = 2; number of detects from imports = 0; weighted average½ LOD = 0.002478). Since there were no information regarding the percentage of treated radicchio available, 100% CT was assumed. The same decomposited data as for head lettuce (with n=3 and truncation at 0.7 ppm) was used for radicchio. The RDF contained 998 (generated) detects, and 8963 repeated ½ LOD values at 0.002478 ppm.

Chronic dietary exposure - The calculated value of 0.00031 ppm was used for the residue input in chronic dietary exposure assessment . This value was the average of 27 detected residues (sum = 0.459 ppm) and 664 repeated ½ LOD values at 0.002478 ppm; 100% CT was used for calculation of the number of ½ LOD values.

Spinach (PB)

Acute dietary exposure- For spinach-fresh, the 1995-1997 PDP data were used (total number of samples = 1638; number of samples from imports = 46; total number of detects = 41 [including a detect from diazoxon]; number of detects from imports = 4; range of detected residues [adding a diazoxon residue to diazinon] = 0.003 - 0.45 ppm, weighted average½ LOD = 0.003645 ppm). Because the number of import samples did not constitute a large portion of the total samples, the maximum %CT estimate for domestic samples, according to BEAD 1999 report (44% CT) was incorporated into the RDF. The RDF contained 40 detected residues [including one with residues of diazinon and diazoxon added together], 918 zeros, and 680 repeated ½ LOD values at 0.003645 ppm. For spinach-canned, the 1997-1998 PDP data were used (total number of samples = 863; number of samples from imports = 1; total number of detects = 0; weighted average½ LOD = 0.003978 ppm). Since the estimated maximum %CT for processed spinach is 60%, the RDF contained 40 zeros and 60 repeated ½ LOD values at 0.003978 ppm.

Chronic dietary exposure- For spinach-fresh, the 1995-1997 PDP data were used. The calculated average

value of 0.00180 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 40 detected residues (sum = 1.791 ppm), 1278 zeros, and 320 repeated ½ LOD values at 0.003645 ppm; the average %CT, 22% (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values. For spinach-canned, the 1997-1998 PDP data for spinach-canned was used (total number of samples = 863; number of samples from imports = 1; total number of detects = 0; weighted average½ LOD = 0.003978 ppm). The average value of 0.000955 ppm (average of 24 repeated ½ LOD values at 0.003978 ppm and 76 zeros) was used for the residue input in chronic dietary exposure assessment; the average % CT, 24% (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Swiss Chard (NB)
Acute dietary exposure- No PDP data were available. FDA (domestic surveillance) analyzed only 23 sample in1993; one detected residue was found (0.11 ppm). However, since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. Therefore, the 1993-1994 PDP data for celery were translated to Swiss chard (total number of samples = 810; number of samples from imports = 15; total number of detects = 69; number of detects from imports = 0 ; range of detected residues = 0.005 - 0.3 ppm, weighted average½ LOD = 0.0028 ppm). Because there was no information regarding the percentage of treated Swiss chard available from BEAD, 100% CT was assumed. With the assumption that there were 3 units of medium-sized Swiss chard in a 5 lbs composite sample, the same decomposited data for celery truncated at the tolerance, 0.7 ppm, (range of generated values = 0.0004 - 0.67 ppm) was used. The RDF contained 997 generated detects, and 759 repeated ½ LOD values at 0.0028 ppm.

Chronic dietary exposure- The average value of 0.00417 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 69 detects, 729 zeros and 12 repeated ½ LOD at 0.0028 ppm; a 100% average CT (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

BRASSICA LEAFY VEGETABLE GROUP

Bok Choy (Chinese Cabbage) **(PB)**
Acute dietary exposure- No PDP data were available for bok choy. FDA (domestic surveillance) analyzed 98 sample between 1992 and 1998; 2 detected residues were found (0.04 ppm, 0.1 ppm). Because there was no information available from BEAD regarding the percentage of treated bok choy, 100% CT was assumed. The RDF contained 2 detected residues, and 96 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The calculated average value of 0.0029 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 2 detected residues, and 96 repeated ½ LOD values at 0.0015 ppm; 100% CT was used for the calculation of the number of ½ LOD values.

Broccoli-Chinese The data for bok choy was used for both acute and chronic exposure.

Broccoli (NB, PB)

Acute dietary exposure- For broccoli-fresh, the 1994 PDP data were used (total number of samples = 634; number of samples from imports = 15; total number of detects = 0; weighted average½ LOD = 0.00280 ppm). Because the number of import samples did not constitute a large portion of the total samples, the maximum %CT estimate for domestic samples, according to BEAD 1999 report (21% CT) was incorporated into the RDF. The RDF contained 79 zeros, and 21 repeated ½ LOD values at 0.00280 ppm; the RDF was used for both not-blended and partially-blended food forms of broccoli.

Chronic dietary exposure- The average value of 0.00031 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 89 zeros and 11 repeated ½ LOD at 0.00280 ppm; the average %CT, 11% (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Brussels Sprouts (PB)

Acute dietary exposure- No PDP data were available for Brussels sprouts. The FDA domestic surveillance data for 1992-1998 contain 14 analyses with no detectable residues reported. However, since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. The use pattern for Brussels sprouts, broccoli and cauliflower are identical; therefore, the 1994 PDP data for broccoli were used as surrogate data (634 samples analyzed; total number of detects = 0; weighted average½ LOD = 0.00280 ppm). Based on the assumption of all nondetectable residues and 100% CT(1999 BEAD report), the acute anticipated residue is equal to ½ LOD = 0.0028 ppm.

Chronic dietary exposure- BEAD reports an average 90% CT for Brussels sprouts. Therefore, the chronic anticipated residue is (½ LOD)*(0.90)= 0.0025 ppm.

Cabbage (NB, PB)

Acute dietary exposure- No PDP data were available for cabbage-green and red-fresh. The FDA domestic surveillance data contained 532 total data for cabbage with only one detected residue found (0.11 ppm). There were not enough detected residues (30 or more) for decompositing; Therefore, the detected residue in FDA data (0.11 ppm) was multiplied by a factor of 3 (assuming there are 3 cabbages in 5 lb samples) to calculated the highest possible residue in single cabbage (0.33 ppm). This value (0.33 ppm) was only used in the RDF for not-blended food forms of cabbage. The RDF was constructed based on 17% CT estimate (BEAD, 1999). It contained one detected residue (0.33 ppm), 442 zeros and 89 repeated ½ LOD values at 0.0015 ppm. A different RDF was constructed for partially blended food forms of cabbage (processed cabbage) since the maximum %CT estimate was different (31%). The RDF for partially-blended food forms of green and red cabbage contained one detected residue (0.11 ppm), 367 zeros and 164 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The average value of 0.00037 ppm was used for the residue input in chronic dietary exposure assessment for fresh cabbage (cooked and uncooked). This value was the average of one detected residue (0.11 ppm), 473 zeros and 58 repeated ½ LOD values at 0.0015 ppm; the average 11%CT (BEAD, 1999 report for fresh cabbage) was used for the calculation of the number of ½ LOD values.

The average value of 0.0004 ppm was used for the residue input in chronic dietary exposure assessment for processed cabbage (canned and cured). This value was the average of one detected residue (0.11 ppm), 463 zeros and 68 repeated ½ LOD values at 0.0015 ppm; the average 13% CT (according to BEAD 1999 report for processed cabbage) was used for the calculation of the number of ½ LOD values.

Cabbage-Savoy (NB)

Acute dietary exposure- No PDP or FDA data were available for cabbage-savoy. Therefore, the FDA domestic surveillance data for cabbage were translated to cabbage-savoy (total number of samples = 532; total number of detected residue = 1; detected residue: 0.11 ppm). As was explained for cabbage, the data were not decomposited. The RDF was constructed based on the estimated maximum 17% CT; it contained 1 adjusted residue value (0.33 ppm), 442 zeros, and 89 repeated ½ LOD at 0.0015 ppm.

Chronic dietary exposure-The average value of 0.00037 ppm was used for the residue input in chronic dietary exposure assessment for savoy cabbage. This value was the average of one detected residue (0.11 ppm), 473 zeros and 58 repeated ½ LOD values at 0.0015 ppm; the average 11%CT (according to BEAD 1999 report for fresh cabbage) was used for the calculation of the number of ½ LOD values.

Cauliflower (NB, PB)

Acute dietary exposure- No PDP data were available for cauliflower. The FDA domestic surveillance data between 1992 and 1998 for cauliflower contained 269 total data with no detected residue found. The RDF was constructed based on 31% CT estimate (BEAD 1999). It contained 69 zeros and 31 repeated ½ LOD values at 0.0015 ppm. This RDF was used for both not-blended and partially-blended food forms of cauliflower.

Chronic dietary exposure- The value of 0.00024 ppm was used for the residue input in dietary exposure assessment. This value was the average of 84 zeros and 16 repeated ½ LOD at 0.0015 ppm; an average 16%CT(according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Collards/Kale/Mustard Greens (PB)

Acute dietary exposure- No PDP data were available for collards / kale / mustard greens. FDA analyzed 153 samples of collards (4 detected residues: 0.163, 0.330, 0.037, 0.005 ppm), 87 samples of mustard green (2 detected residues: 0.1, 0.83 ppm), and 115 samples of kale (1 detected residue: 0.005 ppm). The data for all the three crops were pooled together (total number of data = 355, number of detected residues = 7) and used for each crop. The RDF was constructed based on the maximum % CT estimate of 28%, 1%, 39% for collards, kale and mustard green respectively. Therefore, for collards, the RDF contained 7 detects, 256 zeros, and 92 repeated ½ LOD values at 0.0015 ; for kale, the RDF contained 7 detects and 693 zeros; and for mustard green the RDF contained 7 detects, 216 zeros, and 131 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The calculated average values of 0.00439 ppm for collards (average of 7 detects, 60 repeated ½ LOD, and 288 zeros; based on average % CT of 19%), 0.0021 ppm for mustard green (average of 7 detects, and 693 zeros; based on average % CT of 1%), and 0.00441 ppm for kale (average

of 7 detects, 64 repeated ½ LOD, and 284 zeros; based on average % CT of 20%) was used for the residue input in chronic dietary exposure assessment.

Kohlrabi (NB)

Acute dietary exposure- No PDP or FDA data were available for kohlrabi. The FDA domestic surveillance data for cauliflower was translated to kohlrabi (total number of samples = 269; total number of detected residue = 0). Since there was no detected residues, the data were not decomposited. Because there was no % CT information for kohlrabi from BEAD, it was assumed that kohlrabi is 100% treated. Therefore, a residue value of 0.0015 ppm (equal to ½ LOD) was used for kohlrabi.

Chronic dietary exposure- The residue value of 0.0015 ppm was also used for kohlrabi in chronic dietary exposure assessment.

LEGUME VEGETABLE GROUP

Green Beans-succulent (PB)

Acute dietary exposure- The 1994-95 PDP data for fresh green beans were used (total number of samples= 1178; total number of detects= 5, and a weighted average½ LOD= 0.0033). The RDF for partially blended fresh green beans contained 5 detected residues (0.005, 0.012, 0.011, 0.045, 1.1 ppm), 1143 zeros and 30 repeated ½ LOD values at 0.0033 ppm. An estimated 3% maximum CT for fresh succulent snap beans (according to the 1999 BEAD report) was incorporated into the RDF. For partially-blended canned green beans, the 1996-98 PDP data for canned green beans were used (total number of samples=854; total number of detects=0, and a weighted average½ LOD= 0.0027). The RDF contained 828 zeros and 26 repeated ½ LOD values. An estimated 8% maximum CT for succulent snap beans grown for processing (according to the 1999 BEAD report) was incorporated into the RDF. For partially-blended frozen green beans, the 1996-98 PDP data for frozen green beans were used (total number of samples=743, total number of detects=11, and a weighted average½ LOD=0.0026). The RDF contained 11 detected residues (0.003, 0.005(4), 0.006, 0.007, 0.012, 0.017, 0.018, 0.019 ppm), 721 zeros, and 11 repeated ½ LOD values. An estimated 8% maximum CT for succulent snap beans grown for processing (according to the 1999 BEAD report) was incorporated into the RDF.

Chronic dietary exposure- The average value of 0.0012 ppm was used for the residue input in chronic dietary exposure assessment for fresh succulent beans and black-eyed peas. This value was the average of 5 detected residues (sum= 1.173), 1166 zeros and 7 repeated ½ LOD values at 0.0033 ppm (assuming a weighted average 1%CT for fresh market). For canned green beans the average value of 0.0001 ppm was used (820 zeros and 34 repeated ½ LOD at 0.0027 ppm; average 4%CT for processing beans). For frozen green beans the average value of 0.0002 ppm was used (743 total samples with 11 detected residues (sum=0.102 ppm), 19 repeated ½ LOD at 0.0026 ppm and 713 zeros assuming 4%CT).

Green beans (succulent) data were translated for other succulent beans including succulent black-eyed peas.

Green Peas-succulent (PB)

Acute dietary exposure- The 1992-98 FDA data for fresh sweet peas were used (total number of samples= 540; total number of detects= 13, and ½ LOD= 0.0015). An estimated maximum 8%CT value (according to the 1999 BEAD report) was incorporated into the RDF. The RDF for partially-blended fresh peas contained 13 detected residues (0.005(5), 0.08, 0.01, 0.040, 0.059,0.026, 0.022, 0.1, 0.81 ppm), 497 zeros and 30 repeated ½ LOD values at 0.0015 ppm. For partially-blended canned sweet peas, the 1994-96 PDP data were used (total number of samples=746; total number of detects=0, and a weighted average½ LOD= 0.0026). An estimated maximum 5%CT value (according to the 1999 BEAD report) was incorporated into the RDF. The RDF contained 709 zeros and 37 repeated ½ LOD values at 0.0026 ppm. For partially-blended frozen sweet peas, the 1994-96 PDP data were used (total number of samples=703, total number of detects=10, and a weighted average½ LOD=0.0025). An estimated maximum 5%CT value (according to the 1999 BEAD report) was incorporated into the RDF. The RDF contained 10 detected residues (0.005(4), 0.006(2), 0.009(2), 0.029, 0.049 ppm), 668 zeros, and 25 repeated ½ LOD values.

Chronic dietary exposure- The average value of 0.0022 ppm was used for the residue input in chronic dietary exposure assessment for fresh succulent sweet peas. This value was the average of 13 detected residues (sum=1.172 ppm), 518 zeros and 9 repeated ½ LOD values at 0.0015 ppm; the weighted average 4%CT from BEAD was used to estimate the number of repeated ½ LOD values. For canned sweet peas the average value of 0.000024 ppm was used This value was the average of 739 zeros and 7 repeated ½ LOD at 0.0026 ppm; the weighted average 1%CT from BEAD was used. For frozen sweet peas the average value of 0.000246 ppm was used. This value was the average of 10 detected residues (sum=0.128 ppm), 675 zeros, and 18 repeated ½ LOD values at 0.0025 ppm; the weighted average 1%CT from BEAD was used.

FRUITING VEGETABLE GROUP

Tomato (B, PB, NB)

Acute dietary exposure- The 1996-98 PDP data for tomatoes were used (total number of samples= 1597; total number of detects=10 [0.003-0.09 ppm, sum of detects = 0.173 ppm], number of samples from imports= 533, and a weighted average½ LOD= 0.0026). Because the number of import samples constituted a large portion of the total samples, the estimated maximum %CT value of 38% (based on assumption of 100%CT for import samples and 7% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF for fresh market tomatoes. To accommodate for possible higher level residues in single serving not-blended items, HED has multiplied each detected residue by a factor of 8.3 (tolerance/highest detected residue). The RDF for not blended commodities contained 10 factored residues (0.025-0.75 ppm), 990 zeros and 597 repeated ½ LOD values at 0.0026 ppm. The RDF for partially blended commodities contained 10 detected residues (0.003-0.09 ppm), 990 zeros and 597 repeated ½ LOD values at 0.0026 ppm. The RDF for catsup, paste, and puree, which are also considered to be partially blended commodities was constructed based on 21% CT (maximum CT for domestic processing tomatoes); it contained 10 detected residues (0.003-0.09 ppm), 1262 zeros and 325 repeated ½ LOD values at 0.0026 ppm.

The RDF for dried tomatoes, which is a blended commodity, contains 10 detected residues, and 1587 repeated ½ LOD values at 0.0026 ppm.

Chronic dietary exposure- The average value of 0.00103 ppm was used for the residue input for tomato commodities derived from fresh tomatoes (whole tomatoes and dried tomatoes) . This value was the average of 10 detected residues (sum = 0.173 ppm), 1022 zeros and 565 repeated ½ LOD values. A weighted average 36%CT (based on 100%CT for imports and 4%CT for domestic fresh market samples) was used in estimating the number of ½ LOD values.

The average value of 0.000327 ppm was used for the residue input for commodities derived from processing tomatoes (tomato juice, catsup, paste, and puree). This value was the average of 10 detected residues, 1453 zeros, and 134 repeated ½ LOD. A weighted average 9% CT (according to the 1999 BEAD report) was used in estimating the number of ½ LOD values.

Green Peppers (NB, PB)

Acute dietary exposure- No PDP data were available for peppers. The 1992-1998 FDA domestic surveillance data for green peppers contain 397 samples with 8 detects (0.005, 0.02, 0.02, 0.04, 0.04, 0.10, 0.21, 0.251 ppm). There are too few detects to decomposite the monitoring data so the data were used directly. To accommodate for possible higher level residues in single serving not-blended items, the reported residues were multiplied by a factor of 2 (tolerance/highest detected residue). The estimated 19% maximum CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for not-blended commodities of peppers contains 8 factored detects (0.01, 0.04, 0.04, 0.08, 0.08, 0.20, 0.42, 0.5 ppm), 322 zeros and 67 repeated ½ LOD values at 0.0015 ppm. The RDF for partially blended commodities of peppers contains the 8 detects as reported by FDA (0.005, 0.02, 0.02, 0.04, 0.04, 0.10, 0.21, 0.251 ppm), 322 zeroes, and 67 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure

The estimated weighted average 8% CT value according to the 1999 BEAD report was incorporated into estimating chronic dietary exposure. The average of the 8 detects, 365 zeroes, and 24 samples at ½ LOD=0.0017 ppm.

Peppers-other and Pimiento pepper

Green pepper data were used as surrogate data.

Peppers-chilli incl jalapeno (NB, PB)

Acute dietary exposure

The 1992-1998 FDA domestic surveillance data for hot peppers contain 83 samples with 1 detect reported in 1993 at 0.03 ppm. The 1999 BEAD report indicates that the weighted average %CT is 0 and the estimated maximum is only 1%. The use pattern for hot peppers is identical to that for green peppers; therefore, green pepper data will be used as surrogate data for hot peppers, adding zeroes in the RDF to account for the lower %CT for hot peppers. The RDF for not-blended commodities of hot peppers contained 8 factored detects (0.0.01, 0.04, 0.04, 0.08, 0.08, 0.20, 0.42, 0.5 ppm) and 792 zeros. The RDF for partially blended commodities of peppers contained the 8 detects as reported by FDA (0.005, 0.02, 0.02, 0.04, 0.04, 0.10, 0.21, 0.251 ppm), and 792 zeroes.

Chronic dietary exposure

Assuming 1%CT, the chronic anticipated residues are the average of the 8 detects as reported by FDA (0.005, 0.02, 0.02, 0.04, 0.04, 0.10, 0.21, 0.251 ppm), and 792 zeroes= 0.686/800=0.00086 ppm.

CUCURBIT VEGETABLES GROUP

Cucumber(NB, PB)
Acute dietary exposure- The 1992-98 FDA data for cucumbers were used (total number of samples= 451; total number of detects=1[0.088 ppm], and ½ LOD= 0.0015). The estimated 7%CT (fresh market cucumbers) and 12%CT (processing cucumbers) value according to the 1999 BEAD report was incorporated into the appropriate RDF. To accommodate for possible higher level residues in single serving not-blended items, HED has multiplied the detected residue by a factor of 8.5 (tolerance/detected residue). The RDF for not-blended commodities (fresh market; uncooked) contained 1 factored detect (0.75 ppm), 419 zeros, and 31 repeated ½ LOD values at 0.0015 ppm. For partially-blended commodities (processed) , the RDF contained 1 detected residue (0.088 ppm), 397 zeros and 53 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The average value of 0.00025 ppm (uncooked) and 0.00027 ppm (canned) were used for the residue input in chronic dietary exposure assessment for cucumbers. For uncooked cucumbers, this value was the average of 1 detected residue, 433 zeros and 17 repeated ½ LOD values (assuming a weighted average 4%CT). For canned cucumbers, this value was the average of 1 detected residue, 428 zeros and 22 repeated ½ LOD values. A weighted average 5%CT was used to estimate the number of ½ LOD values.

Squash, **summer (NB, PB)**
Acute dietary exposure- The 1992-98 FDA data for summer squash were used (total number of samples= 514; total number of detects=1[0.11 ppm], and ½ LOD= 0.0015). The estimated 9%CT value according to the 1999 BEAD report was incorporated into the RDF. To accommodate for possible higher level residues in single serving not-blended items, HED has multiplied the detected residue by a factor of 4.5 (tolerance/detected residue). The RDF for not-blended contained 1 factored detect (0.5 ppm), 468 zeros and 45 repeated ½ LOD values at 0.0015 ppm. The RDF for partially-blended contained 1 detected residue (0.11 ppm), 468 zeros and 45 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The average value of 0.00027 ppm was used for the residue input in chronic dietary exposure assessment for summer squash. This value was the average of 1 detected residue, 493 zeros and 20 repeated ½ LOD values. A weighted average 4%CT was used to estimate the number of ½ LOD values.

Squash, winter (NB)
Acute dietary exposure- The 1997-98 PDP data for winter squash were used (total number of samples= 969; total number of detects=2, number of samples from imports=349, and a weighted average½ LOD= 0.0025). Because the number of import samples constituted a large portion of the total samples, the weighted average %CT of 42% (based on the assumption of 100%CT for imported samples and 9% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the

RDF. The RDF for not-blended contained 2 detected residues (0.003, 0.007 ppm), 562 zeros and 405 repeated ½ LOD values at 0.0025 ppm.

Chronic dietary exposure- The average value of 0.0006 ppm was used for the residue input in chronic dietary exposure assessment for winter squash. This value was the average of 2 detects, 595 zeros and 372 repeated ½ LOD values. (assuming a weighted average 39%CT based on 100%CT for imports and 4%CT for domestic samples).

Cantaloupe(PB, NB)

Acute dietary exposure- The 1992-98 FDA data for cantaloupes were used (total number of samples= 414; total number of detects=3, and ½ LOD= 0.0015). The estimated 18%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for not-blended/partially-blended contained 3 detected residues (0.02, 0.02, 0.03 ppm), 339 zeros and 72 repeated ½ LOD values at 0.0015 ppm. Cantaloupe data and 18%CT were translated for **Persian melon, casabas, crenshaws, balsam pear, bittermelon, and wintermelon**.

For **honeydew**, the estimated 10%CT value was incorporated into the RDF (include 3 detected residues, 373 zeros, and 38 repeated ½ LOD values).

Chronic dietary exposure- The average value of 0.00034 ppm was used for the residue input in chronic dietary exposure assessment for **cantaloupes, Persian melon, casabas, crenshaws, balsam pear, bittermelon, and wintermelon**. The average of 3 detected residues, 364 zeros and 47 repeated ½ LOD value was used. A weighted average 12%CT was used to estimate the number of ½ LOD values.

The average value of 0.00023 ppm was used for **honeydew**. The average of 3 detected residues, 393 zeros, and 18 repeated ½ LOD values was used. A weighted average 5%CT was used to estimate the number of ½ LOD values.

Watermelon (NB, PB)

Acute dietary exposure- The 1992-98 FDA data for watermelon were used (total number of samples= 415; total number of detects=1, and ½ LOD= 0.0015). An estimated 5%CT value, according to the 1999 BEAD report, was incorporated into the RDF. The RDF for not-blended/partially-blended commodities contained 1 detected residues (0.002 ppm[1]), 394 zeros and 20 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The average value of 0.00003 ppm was used for the residue input in chronic dietary exposure assessment for watermelon. This value was the average of 1 detected residues, 407 zeros and 7 repeated ½ LOD values. A weighted average 2%CT was used to estimate the number of ½ LOD values.

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[1] The 1 detected residue for watermelon(0.002) reported by FDA during 1992-98 is below the LOQ (0.01 ppm).

Oranges (NB, PB)

Acute dietary exposure- For oranges-fresh(peeled), the 1994-1996 PDP data for oranges (peeled) were used (total number of samples = 1892; number of samples from imports = 23; total number of detects = 0; weighted average½ LOD = 0.003091 ppm). Because the number of import samples did not constitute a large portion of the total samples, the maximum %CT value of 3% for domestic crop (according to BEAD 1999 report) was incorporated into the RDF. Since no detected residues were found in oranges-peeled, no decompositing of the composited data were conducted. The RDF contained 97 zeros and 3 repeated ½ LOD values at 0.003091 ppm. This RDF was also used for partially-blended food forms of oranges.

Chronic dietary exposure- The calculated value of 0.000031 ppm was used for the residue input in chronic dietary exposure assessment for oranges. This value was the average of one ½ LOD value at 0.003091 ppm and 99 zeros; the average % CT of 1% was used to calculate the number of ½ LOD values.

Oranges-Juice (PB)

Acute dietary exposure- For oranges-Juice, the 1997-1998 PDP data for orange juice were used (total number of samples = 1392; number of samples from imports = 532; total number of detects = 0; weighted average½ LOD = 0.00368 ppm). Because the number of import samples constituted a large portion of the total samples, the weighted average %CT value of 40% (based on assumption of 100% crop treated for import samples and 3% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF. The RDF contained 60 zeros and 40 repeated ½ LOD values at 0.00368 ppm.

Chronic dietary exposure- The calculated value of 0.00144 ppm was used for the residue input in chronic dietary exposure assessment for orange juice. This value was the average of 39 repeated ½ LOD values at 0.00368 ppm and 61 zeros; the weighted average %CT value of 39% (based on the assumption of 100% crop treated for import samples and 1% average %CT estimate for domestic samples, according to BEAD 1999 report) was used.

Oranges, Peel (PB)

Data on citrus peels is not available. PDP data are based on peeled oranges; therefore, they are not of use in estimating residues on the peel. FDA data are available on unpeeled oranges. During the period of 1992-1998 FDA analyzed 966 unpeeled orange sample with 6 detects (0.038, 0.03, 0.05, 0.015, 0.07, and 0.06 ppm). Processing data are not available for citrus peels (use on citrus is not being supported for reregistration); therefore, FDA data are of limited usefulness also. In this assessment we are making a conservative estimate of dietary exposure from citrus peels based on the assumption that residues will not exceed tolerance levels for citrus peels (0.7 ppm).

Acute dietary exposure- The RDF for orange peels contains 100 values, 3 of which are equal to the tolerance (0.7 ppm), and 97 of which are set at zero. A maximum 3%CT value for oranges (according to BEAD 1999 report) was incorporated into the RDF.

Chronic dietary exposure- An average value of 0.007 ppm was used for chronic exposure based on the average of 100 values, 1 of which is equal to tolerance (0.7 ppm) and 99 zeroes (based on average 1%CT from BEAD report).

Lemons/Limes/Tangerines/Tangelos/Kumquats/Citrus Citron (NB, PB)
Acute dietary exposure- For lemons/limes/tangerines/tangelos/kumquats/citrus citron-fresh(peeled), the 1994-1996 PDP data for oranges (peeled) were used (total number of samples = 1892; number of samples from imports = 23; total number of detects = 0; weighted average½ LOD = 0.003091 ppm). Because the number of import samples did not constitute a large portion of the total samples, the maximum %CT value of 1% for domestic crop (according to BEAD 1999 report) was incorporated into the RDF. Since no detected residues were found in oranges-peeled, no decompositing of the composited data were conducted. The RDF contained 99 zeros and one ½ LOD value at 0.003091 ppm. This RDF was also used for partially-blended food forms of all the citrus fruits mentioned above. The DEEM default PFs were used for all the processed food forms.

Chronic dietary exposure- The calculated value of 0.000031 ppm was used for the residue input in chronic dietary exposure assessment of lemons/limes/tangerines/tangelos/kumquats/citrus citron. This value was the average of one ½ LOD value at 0.003091 ppm and 99 zeros; the maximum 1% CT estimate was used to calculate the number of ½ LOD values (note that BEAD estimate for average % CT is 0%, however since the maximum % CT of 1% was used for acute according to BEAD 1999 report, this value was also used in chronic dietary exposure conservatively.

Lemon-Juice/Lime-Juice/Tangerine-Juice (PB)
Acute dietary exposure- For lemon-juice/lime-juice/tangerine-juice, the 1997-1998 PDP data for orange juice were used (total number of samples = 1392; number of samples from imports = 532; total number of detects = 0; weighted average½ LOD = 0.00368 ppm). Because the number of import samples constituted a large portion of the total samples, the weighted average %CT value of 39% (based on assumption of 100% crop treated for import samples and 1% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF. The RDF contained 61 zeros and 39 repeated ½ LOD values at 0.003684 ppm.

Chronic dietary exposure- The calculated average residue value of 0.00144 ppm was used for the residue input in chronic dietary exposure assessment for lemon/lime/tangerine-juice, based on the orange juice assessment.

Lemon/Lime, Peel (PB)
Acute dietary exposure- The RDF for lemon peels contains 100 values, 1 of which are equal to the tolerance (0.7 ppm), and 99 of which are set at zero. A maximum 1%CT value for oranges (according to BEAD 1999 report) was incorporated into the RDF.

Chronic dietary exposure- An average value of 0.007 ppm was used for chronic exposure based on the average of 100 values, 1 of which is equal to tolerance (0.7 ppm) and 99 zeroes (based on average 1%CT from BEAD report).

Grapefruit (NB)
Acute dietary exposure- For grapefruit-fresh(peeled), the 1994-1996 PDP data for oranges (peeled) were used (total number of samples = 1892; number of samples from imports = 23; total number of detects = 0; weighted average½ LOD = 0.003091 ppm). Because the number of import samples did not constitute a

large portion of the total samples, the maximum %CT value of 4% for domestic crop (according to BEAD 1999 report) was incorporated into the RDF. Since no detected residues were found in oranges-peeled, no decompositing of the composited data were conducted. The RDF contained 96 zeros and 4 repeated ½ LOD values at 0.003091 ppm. This RDF was also used for partially-blended food forms of grapefruits.

Chronic dietary exposure- The calculated average residue value of 0.000062 ppm was used for the residue input in chronic dietary exposure assessment for grapefruits. This value was the average of 2 repeated ½ LOD values at 0.003091 ppm and 98 zeros; the average % CT of 2% was used to calculate the number of ½ LOD values.

Grapefruit-Juice (PB)

Acute dietary exposure- For grapefruit-Juice, the 1997-1998 PDP data for orange juice were used (total number of samples = 1392; number of samples from imports = 532; total number of detects = 0; weighted average½ LOD = 0.00368 ppm). Because the number of import samples constituted a large portion of the total samples, the weighted average %CT value of 40% (based on assumption of 100% crop treated for import samples and 4% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF. The RDF contained 60 zeros and 40 repeated ½ LOD values at 0.003684 ppm.

Chronic dietary exposure- The calculated average residue value of 0.001437 ppm was used for the residue input in chronic dietary exposure assessment for grapefruit juice. This value was the average of 39 repeated ½ LOD values at 0.00368 ppm and 61 zeros; the weighted average %CT value of 39% (based on the assumption of 100% crop treated for import samples and 2% average %CT estimate for domestic samples, according to BEAD 1999 report) was used.

Grapefruit-peel

Acute dietary exposure- The RDF for grapefruit peels contains 100 values, 4 of which are equal to the tolerance (0.7 ppm), and 96 of which are set at zero. A maximum 4%CT value for oranges (according to BEAD 1999 report) was incorporated into the RDF.

Chronic dietary exposure- An average value of 0.0014 ppm was used for chronic exposure based on the average of 100 values, 2 of which is equal to tolerance (0.7 ppm) and 98 zeroes (based on average 2%CT from BEAD report).

POME FRUITS GROUP

Apples (NB, PB, B)

Acute dietary exposure - In 1999, PDP started sampling single apples (126 of them) or single portions of apples (256 of them) that constituted the 158 total composite samples that were analyzed. These data were not used in this assessment because results were not available for a complete year. Potential residues on samples gathered from fresh apples may be expected to differ from those on apples that have been in controlled storage for several months. Consequently, they were not used for not-blended food forms of apples. The 1993-1996 PDP data for apples (total number of samples = 2554; number of samples from imports = 118; total number of detects = 32; number of detects from imports = 9 ; range of detected

residues = 0.003 - 0.33 ppm, weighted average½ LOD = 0.002614 ppm) were use for both not-blended and partially-blended food forms of apples. For not-blended food forms, the detected residue data were decomposited to, initially, 1000 residue values, which after truncation at tolerance (0.5 ppm) totaled 992 (range of generated values = 0.0000- 0.4974 ppm with n = 15). Because the number of detects from import samples constituted a large portion of the total detects, the %CT was weighed for import samples. The weighted average %CT value of 10% (based on assumption of 100% crop treated for import samples and 6% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF. The RDF for not-blended food forms contained 992 detects, 71257 zeros, and 6925 repeated ½ LOD values at 0.002614 ppm. For partially-blended food forms of apples, the 1993-1996 PDP data were also used. The RDF contained 32 detects, 2299 zeros, and 223 repeated ½ LOD values at ppm.

For a blended food form of apples, the RDF contained 32 detects and 2522 repeated ½ LOD values at 0.002614 ppm.

Chronic dietary exposure- The calculated value of 0.000542 ppm was used for the residue input in chronic dietary risk assessment. This value was the average of 32 detected residues (sum = 0.934), 2350 zeros, and 172 repeated ½ LOD values at 0.002614 ppm; the weighted average 8%CT (based on assumption of 100% crop treated for import samples and 4% average %CT estimate for domestic samples, according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Apples Juice (PB)

Acute dietary exposure - No detected residues were reported in 1996-1998 PDP data for apple juice (total number of samples = 1554; total number of imports = 448, total number of detects = 0, weighted average½ LOD = 0.002549 ppm). Because the number of import samples constituted a large portion of the total samples, the weighted average %CT value of 33% (based on the assumption of 100% crop treated for import samples and 6% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF. The RDF contained 67 zeros and 33 repeated ½ LOD values at 0.002549 ppm).

Chronic dietary exposure- The calculated value of 0.000816 ppm was used for the residue input in chronic dietary risk assessment. This value was the average of 68 zeros and 32 repeated ½ LOD values at 0.002549 ppm; the weighted average %CT, 32% (based on assumption of 100% crop treated for import samples and 4% average %CT estimate for domestic samples, according to BEAD 1999 report) according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Pear (NB, PB, B)

Acute dietary exposure - For not-blended food forms of pears, the PDP single serving data for pears from July of 1998 to June of 1999 (total number of samples = 645; number of samples from imports = 43; total number of detects = 6 ; range of detected residues = 0.003 - 0.084 ppm, weighted average½ LOD = 0.0035 ppm) were used. Because the number of import samples constituted a large portion of the total samples, the weighted average %CT value of 24% (based on assumption of 100% crop treated for import samples and 19% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF. The RDF contained 6 detects, 490 zeros, and 149 repeated ½ LOD values at 0.0035 ppm.

For partially-blended food forms of pear, the 1996-1998 PDP (composite) data for pears (total number of samples = 1420; number of samples from imports = 217; total number of detects = 37; number of detects from imports = 24 ; range of detected residues = 0.003 - 0.094 ppm, weighted average½ LOD = 0.0030 ppm) were use. Because the number of import samples constituted a large portion of the total samples, the weighted average %CT value of 31% (based on assumption of 100% crop treated for import samples and 19% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF. The RDF for partially-blended food forms contained 37 detects, 980 zeros, and 403 repeated ½ LOD values at 0.0030 ppm.

For a blended food form of pear, the 1996-1998 PDP (composite) data for pears were used. The RDF for blended food form contained 37 detects and 1383 repeated ½ LOD values at 0.0030 ppm.

Chronic dietary exposure- The 1996-1998 PDP (composite) data for pears was used for chronic dietary risk assessment. The calculated value of 0.001068 ppm was used. This value was the average of 37 detected residues, 1079 zeros, and 304 repeated ½ LOD values at 0.0030 ppm; the weighted average %CT of 24% (based on assumption of 100% crop treated for import samples and 4% average %CT for domestic samples according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Pear Juice (PB)

No PDP data are available for pear juice. The FDA domestic surveillance data for 1992-1998 contain 22 analyses with no detectable residues reported. However, since the total number of samples in FDA data were below what is generally considered by the Agency to be statistically adequate (100 samples), those data could not be used. PDP data on pears will be used for pear juice as a conservative assumption of residue.

Acute dietary exposure- Use data for partially blended food forms of pear. The RDF contains 37 detects, 980 zeros, and 403 repeated ½ LOD values at 0.0030 ppm.

Chronic dietary exposure- Use the chronic anticipated residue estimated for pear fruit (0.001068 ppm), which was derived from PDP monitoring data.

STONE FRUITS GROUP

Apricot (NB, PB, B)

Acute dietary exposure- No PDP data were available for apricot. FDA analyzed 153 samples with one detected residue (0.11 ppm) between 1992 to 1998. Since apricot is considered a not-blended commodity, 30 detected residues were needed for decompositing. Therefore, since the use pattern of apricot was similar to peach and there was adequate number of PDP data which were preferable to FDA data, the peach PDP data were translated to apricot.

For apricots-fresh, the 1994-1996 PDP data for peaches-fresh were used (total number of samples = 1087; number of samples from imports = 366; total number of detects = 65; number of detects from imports = 57; range of detected residues = 0.003 - 0.16 ppm, weighted average½ LOD = 0.003269). Because the number of import samples constituted a large portion of the total samples, the weighted average %CT value of 79%

(based on the assumption of 100% crop treated and 68% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF. The detected residue data were decomposited to, initially, 1000 residue values which after truncation at tolerance (0.75 ppm) totaled 998 residue values (range of generated values = 0.0 - 0.339 ppm with n = 21). The RDF contained 998 generated detects, 2085 zeros, and 6846 repeated ½ LOD values at 0.003269 ppm.

For partially-blended food forms of apricot, the 1997 PDP data for canned-peaches were used (total number of samples = 754; number of samples from imports = 11; total number of detects = 0; number of detects from imports = 0; weighted average½ LOD = 0.00347 ppm). The % CT estimate of 68% were used according to BEAD 1999 report (since the number of import samples were very low, the %CT were not weighted for 100% CT imports). The RDF contained 32 zeros, and 68 repeated ½ LOD values at 0.00347 ppm.

For apricot-dried, which is considered a blended commodity, a separate RDF was made which contained 65 detects and 1022 repeated ½ LOD values at 0.003269 ppm.

For apricot juice, used apricot PB RDF.

Chronic dietary exposure- For the food forms of apricots that are derived from fresh fruit (uncooked, cooked, dried, and juice), the calculated value of 0.003371 ppm was used in chronic dietary exposure assessment. This value, which was translated from PDP fresh peach data, was the average of 65 detects (sum=0.984 ppm), 215 zeros and 392 repeated ½ LOD values at 0.003269 ppm; the weighted average %CT of 68% (based on 100% CT for imports and 52% CT for domestic samples) was used for the calculation of the number of ½ LOD values.

For canned apricots, the calculated value of 0.00181 ppm was used in chronic dietary exposure assessment. This value, which was based on PDP canned/frozen peach data, was the average of 11 zeros and 12 repeated ½ LOD values at 0.00347 ppm; the average %CT of 52% (from BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Cherries / Cherry-Juice (PB)

Acute dietary exposure- No PDP data were available for cherries. The FDA domestic surveillance data for cherries contained 445 total data between 1992 and 1998 with 29 detected residue found (range = 0.0015[2] - 0.06 ppm). The RDF was constructed based on 29% CT estimate (BEAD 1999). It contained 29 detects, 316 zeros and 100 repeated ½ LOD values at 0.0005 ppm. This RDF was used for partially-blended food forms of cherries.

[2] Cherries: This value was the estimated value of "T" (trace). "Trace" residues in FDA data are assumed (in this review) to be equal to ½ LOQ and LOQ is assumed to be 0.01 ppm in general in FDA data. However, since there is a detected residue of 0.003 ppm, which is lower than 0.01 ppm, reported in FDA data for cherries, that value (0.003 ppm) is assumed to be the LOQ; therefore, the "trace" residue is 0.0015 ppm (0.003 X ½ = 0.0015).

Chronic dietary exposure- The average value of 0.00105 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 29 detects (sum=0.449), 378 zeros and 38 repeated ½ LOD values at 0.0005 ppm; an average 17%CT (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Nectarines (NB)

Acute dietary exposure- No PDP or FDA data were available for nectarines. For nectarines-fresh, the 1994-1996 PDP data for peaches-fresh were used (total number of samples = 1087; number of samples from imports = 366; total number of detects = 65; number of detects from imports = 57 ; range of detected residues = 0.003 - 0.16 ppm, weighted average½ LOD = 0.003269). Maximum %CT of 100% (according to BEAD 1999 report) was used in constructing the RDF for nectarines. The detected residue data were decomposited to, initially, 1000 residue values which after truncation at tolerance (0.5 ppm) totaled 997 residue values (range of generated values = 0.00001 - 0.3756 ppm with n = 21). The RDF contained 997 generated detects and 6847 repeated ½ LOD values at 0.003269 ppm. (Note: Since as a result of truncation of generated residue values at 0.5 ppm, the number of generated residue values reduced by 1 from peach data, 1 values of ½ LOD was added to the number of ½ LOD values so that the total number of expected treated samples; i.e. detects + ½ LOD, be equal to that of peaches.)

Chronic dietary exposure- For nectarines-fresh, the 1994-1996 PDP data for peaches-fresh were used. The calculated average residue value of 0.00300 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 65 detects (sum of which was 0.984 ppm), 392 repeated ½ LOD values at 0.003269 ppm and 195 zeros; the weighted average % CT value of 70% (based on 100% CT for imports and 54% CT for domestic samples) was used for the calculation of the average residue.

Peaches (NB, PB, B)

Acute dietary exposure- For peaches-fresh, the 1994-1996 PDP data were used (total number of samples = 1087; number of samples from imports = 366; total number of detects = 65; number of detects from imports = 57 ; range of detected residues = 0.003 - 0.16 ppm, weighted average½ LOD = 0.003269). Because the number of import samples constituted a large portion of the total samples, the weighted average %CT value of 47% (based on assumption of 100% crop treated for import samples and 20% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF. The detected residue data were decomposited to, initially, 1000 residue values which after truncation at tolerance (0.7 ppm) totaled 998 (range of generated values = 0.00001- 0.52553 ppm with n = 21). The RDF for not-blended food forms contained 998 (generated) detects, 8846 zeros, and 6846 repeated ½ LOD values at 0.003269 ppm.

For partially-blended food forms of peaches, the 1997 PDP data for canned-peaches were used (total number of samples = 754; number of samples from imports = 11; total number of detects = 0; number of detects from imports = 0 ; weighted average½ LOD = 0.00347). The %CT estimate of 20% were used according to BEAD 1999 report (since the number of import samples were very low, the %CT were not weighted for 100% CT imports). The RDF contained 80 zeros and 20 repeated ½ LOD values at 0.003269 ppm. For peaches-dried which is considered a blended commodity, the 1994-1996 PDP data for fresh peaches were used. The RDF for peaches-dried contained 65 detects and 1022 repeated ½ LOD values at 0.003269 ppm.

Chronic dietary exposure- For **peaches-uncooked, cooked, dried, and juice**, the calculated value of 0.0021 ppm was used in chronic dietary exposure assessment. This value was based on fresh peach monitoring data (1087 samples) and was the average of 65 detects (sum=0.984 ppm), 630 zeros and 392 repeated ½ LOD values at 0.003269 ppm; the weighted average %CT of 42% (based on 100% CT for imports and 12% CT for domestic samples) was used for the calculation of the number of ½ LOD values.

For **canned-frozen** food forms of peaches, the calculated value of 0.000416 ppm was used in chronic dietary exposure assessment. This value was the average of 78 zeros and 12 repeated ½ LOD values at 0.00347 ppm; the average %CT of 12% (from BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Plums (NB, PB)

Acute dietary exposure- No PDP data were available for plums. However, FDA analyzed 112 samples of plums between 1992 and 1998 (domestic surveillance data); no residues were detected (weighted average½ LOD = 0.0015 ppm). Using a maximum 54% CT estimate (based on 1999 BEAD report), the RDF contained 54 repeated ½ LOD values at 0.0015 ppm and 46 zeros. This RDF was used for both not-blended and partially-blended food forms of plums.

Chronic dietary exposure- The calculated average residue value of 0.000585 ppm was used for the residue input in chronic dietary exposure assessment of plums. This value was the average of 39 repeated ½ LOD values at 0.0015 ppm and 61 zeros; an average 39 % CT value was used for the calculation of the average residue.

SMALL FRUITS AND BERRIES GROUP

Blackberries/Blackberry-Juice (PB)

Acute dietary exposure- No PDP data were available for blackberries. FDA domestic surveillance data only has 43 samples of blackberries analyzed; this number is below what is considered by the Agency to be statistically adequate (100 samples) and thus could not be used. Therefore, the FDA (domestic surveillance) for caneberries samples (blackberries and black/red raspberries) were pooled together (total number of samples = 192 and 3 detected residues: 0.0005[3], 0.033, 0.001). The RDF was based on 23% CT and contained 3 detects, 41 repeated ½ LOD at 0.00015 ppm, and 148 zeros. This file was also used for blackberry juice which is considered a partially-blended commodity; the DEEM default PF was used for blackberry juice.

Chronic dietary exposure- The value of 0.000205 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 3 detects, 32 repeated ½ LOD at 0.00015 ppm, and

[3] FDA lists this residue as "T" (trace). In this document, trace residues are assumed to be at the level of LOQ/2. It is also assumed that LOQ = 0.01 ppm in FDA data unless lower residue (than 0.01) is reported in FDA for a particular commodity in which case LOQ = the lower residue, and trace residue = lower residue /2. Since the lowest residue found for blackberries (0.001 ppm) is lower than 0.01 ppm, therefore, trace = 0.001 / 2 = 0.0005 ppm for this commodity. In addition, the assumed LOD = LOQ/3 relationship yields : LOD = 0.001 / 3 = 0.0003 ppm and therefore ½ LOD = 0.00015 ppm.

157 zeros; the average %CT, 18% (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Raspberries (PB)

Acute dietary exposure- No PDP data were available for raspberries. The 1992-1998 FDA domestic surveillance data contained 2 detected residues from the total of 139 samples analyzed. Using the maximum % CT estimate, 45% (from 1999 BEAD report), and the FDA data, the RDF was constructed; it contained 2 detected residues (0.033, 0.005 ppm), 77 zeros and 60 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The value of 0.000630 ppm was used for chronic dietary exposure assessment. This value was the average of 2 detects, 104 zeros, and 33 repeated ½ LOD at 0.0015 ppm; the average %CT, 25% (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

Dewberries/Loganberries/Youngberries/Boysenberries (PB)

Acute dietary exposure- No PDP data were available for dewberries/loganberries/ youngberries/boysenberries. FDA (domestic surveillance) analyzed 192 samples of blackberries and raspberries between 1992 and 1998 (with 3 detected residues: 0.0005^4, 0.033, 0.001). Since FDA data for dewberries/loganberries/ youngberries were neither available nor sufficient (in number), the FDA data for caneberries (blackberries and raspberries) were used instead. In addition, since there was no estimate of % CT from BEAD for dewberries/ loganberries/ youngberries/ boysenberries 45% CT, the same as that of raspberry, was assumed. Consequently, the RDF contained 3 detected residues, 106 zeros, and 83 repeated ½ LOD values at 0.00015 ppm.

Chronic dietary exposure- The value of 0.00024 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 3 detects, 106 zeros, and 83 repeated ½ LOD values at 0.00015 ppm; 45% CT was assumed in calculating the number of ½ LOD values.

Blueberries (PB)

Acute dietary exposure- No PDP data were available for blueberries. FDA analyzed 247 domestic samples between 1992 to 1998 in their survey studies with no detected residues found. The RDF was constructed based on 11% CT estimate (BEAD 1999). It contained 89 zeros and 11 repeated ½ LOD values at 0.0015 ppm.

Chronic dietary exposure- The average value of 0.00009 ppm was used for the residue input in chronic dietary exposure assessment. This value was the average of 94 zeros and 6 repeated ½ LOD at 0.0015 ppm; the average %CT, 6% (according to BEAD 1999 report) was used for the calculation of the number of ½ LOD values.

TREE NUTS GROUP

Almonds (PB)
No PDP data were available for almonds. The 1992 and 1995 FDA data contains 23 total samples with no detected residues found. However, the total number of samples are below what is considered statistically reliable by the Agency (minimum total number of 100 samples); therefore, these data could not be used.

Field trial data from CA (MRID 41336518) are available, which were conducted at the 1x label rate of 3 lbs ai/A, delayed dormant, followed by 3 foliar applications at 3 lbs ai/A, with a 45-day PHI. Residues in 8 samples of nutmeats were all non-detectable (<0.01 ppm).

Acute dietary exposure- The maximum percent crop treated is 30%. The RDF for partially-blended almonds is assigned 10 residue values. Three of these are at ½ LOD (0.005 ppm)
and 7 entries are assigned a value of zero.

Chronic dietary exposure-The average percent crop treated is 20%; therefore, the chronic anticipated residue is (0.005 ppm)*(0.2)=0.001 ppm.

Filberts (PB)
Adequate monitoring data are not available for filberts. Field trial data representing application of diazinon at 8 lb ai/A with PHIs of 0 to 7 days, are available (MRID 00091537). A total of four samples were analyzed with residues reported as 0.01, 0.01,0.006, ND. The limit of detection is not known for these analyses so the lowest positive value reported is assumed to represent the limit of detection.

Acute dietary exposure- The maximum percent crop treated is 12%. The RDF for partially-blended filberts is comprised of the 4 samples analyzed with ½ LOD entered for the ND (0.01,0.01,0.006,0.003), and 29 zeroes.

Chronic dietary exposure-The average percent crop treated is 6%; therefore, the chronic anticipated residue is (average of 4 field trial samples) *(%CT/100)=(0.00725ppm)*(0.06)=0.00044 ppm..

Walnuts (PB)
Adequate monitoring data are not available for walnuts. Field trial data from CA (MRID 41336518) conducted at an exaggerated label rate of 3 lbs ai/A delayed dormant followed by 3 foliar applications at 3 lbs ai/A with a 45-day PHI. Residues in all samples of nutmeats were non-detectable (<0.01 ppm).

Acute dietary exposure- The maximum percent crop treated is 14%. The RDF for partially-blended walnuts is assigned 100 residue values. Fourteen of these are at ½ LOD (0.005 ppm)
and 86 entries are assigned a value of zero.

The acute anticipated residue for walnut oil is = (0.14)* (0.005) = 0.0007 ppm.

Chronic dietary exposure-The average percent crop treated is 7%; therefore, the chronic anticipated residue is (0.005 ppm)*(0.07)=0.00035 ppm.

CEREAL GRAINS GROUP

Sweet Corn (NB, PB)

Acute dietary exposure- The 1992-98 FDA data for fresh sweet corn were used (total number of samples= 793; total number of detects= 3, and ½ LOD= 0.0015). The estimated 13%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for not-blended/partially-blended fresh corn commodities contained 3 detected residues (0.005. 0.005, 0.049 ppm), 690 zeros and 100 repeated ½ LOD values at 0.0015 ppm.

For partially-blended canned sweet corn, the 1994-96 PDP data were used (total number of samples=652; total number of detects=0, and a weighted average½ LOD= 0.0021). The RDF contained 567 zeros and 85 repeated ½ LOD values at 0.0021 ppm.

For partially-blended frozen sweet corn, the 1994-96 PDP data were used (total number of samples=635, total number of detects=0, and a weighted average½ LOD=0.0021). The RDF contained 552 zeros, and 83 repeated ½ LOD values at 0.0021 ppm.

Chronic dietary exposure- The average value of 0.0002 ppm was used for the residue input in chronic dietary exposure assessment for fresh sweet corn. This value was the average of 3 detected residues (sum=0.059 ppm), 722 zeros, and 68 repeated ½ LOD values at 0.0015 ppm. A weighted average 9%CT from BEAD was used to estimate the number of values at ½ LOD.

For canned sweet corn the average value of 0.00019 ppm was used. This value was the average of 593 zeros and 59 repeated ½ LOD values at 0.0021 ppm. A weighted average 9%CT from BEAD was used to estimate the number of values at ½ LOD.

For frozen sweet corn the average value of 0.000019 ppm was used. This value was the average of 578 zeros and 57 repeated ½ LOD values at 0.0021 ppm. A weighted average 9%CT from BEAD was used to estimate the number of values at ½ LOD.

Sorghum(B)

Acute dietary exposure- The 1995-97 PDP data for wheat translated for sorghum were used (total number of samples= 1563; total number of detects=24, and a weighted average½ LOD= 0.0032). The estimated 0%CT value according to the 1999 BEAD report was defaulted to 1%CT. The RDF for blended sorghum contained 24 detected residues and 1539 repeated ½ LOD (0.0032 ppm).

Chronic dietary exposure- The average value of 0.0002 ppm was used for the residue input in chronic dietary exposure assessment for sorghum. This value was the average of 24 detected residues and adjustment by the weighted average of 1%CT from BEAD. Average = sum of detects(0.368 ppm)/1563= 0.0002 ppm.

MISCELLANEOUS COMMODITIES

Bananas (NB, PB, B)

Acute dietary exposure- The 1994-95 PDP data for bananas were used (total number of samples= 640 all imports, total number of detects=0 and a weighted average½ LOD= 0.0028). Because there was no information available from BEAD regarding the percentage of treated banana, 100%CT was assumed and 0.0028 ppm was used for all banana food forms. Banana data were translated for plantains.

Chronic dietary exposure- The average value ½ LOD of 0.0028 ppm was used for the residue input in chronic dietary exposure assessment for bananas.

Coffee (B)
Acute dietary exposure- Adequate monitoring data are not available for coffee. The use pattern for this crop is not known; therefore, field trial data could not be used. For the acute dietary assessment, the tolerance for coffee beans (0.2 ppm) was used. Because there was no information available from BEAD regarding the percentage of treated coffee, 100%CT was assumed.

Chronic dietary exposure- A value of 0.2 ppm was used for the residue input in chronic dietary exposure assessment for coffee.

Cottonseed (B)
Acute dietary exposure- Adequate monitoring data are not available for cottonseed. The use pattern for this crop is not known; therefore, field trial data could not be used. For the acute dietary assessment, the tolerance for cottonseed (0.2 ppm) was used. The estimated 0%CT value according to the 1999 BEAD report was defaulted to 1%CT. A point estimate of 0.002 ppm (0.2 ppm*0.01) was used for both cotton seed and oil.

Chronic dietary exposure- The value of 0.002 ppm for cottonseed and oil was based on tolerance and adjustment by the weighted average 1%CT.

Cranberries (PB)
Acute dietary exposure- Adequate monitoring data are not available for cranberries. Cranberries grown in MA and WI (MRID 41434601) were treated for diazinon on cranberries at a rate of 3 lb ai/A for up to 4 foliar applications (total application 12 lb ai/A) and a 7 day PHI. Residue values ranged from 0.03 to 0.19 ppm in treated cranberries. The estimated 73%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for partially-blended commodities contained 8 detected residues (0.03(2), 0.04, 0.08(2), 0.1, 0.19, 0.19 ppm) and 3 zeros.

Chronic dietary exposure- The average value of 0.0435 ppm was used for the residue input in chronic dietary exposure assessment for cranberries. This value was the average of 8 detected residues and adjustment by the weighted average 48%CT from BEAD.

Figs (NB)
Acute dietary exposure- Adequate monitoring data are not available for figs. Three field trials were conducted in CA (MRID 44726801) for diazinon on figs at a rate of 1.0 lb ai/A for up to 3 applications

(total application 3.0 lb ai/A) and a 5 day PHI. The combined residue values ranged from 0.17 to 0.39 ppm[5] in treated dried figs. The estimated 26%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for not-blended contained 6 detected residues (0.17, 0.20, 0.29, 0.30, 0.34, 0.39 ppm) and 17 zeros.

Chronic dietary exposure- The average value of 0.048 ppm was used for the residue input in chronic dietary exposure assessment for figs. This value was the average of 6 detected residues, 29 zeros, and the weighted average 17%CT from BEAD. A weighted average 17%CT was used to estimate the number of ½ LOD values.

Grapes (PB)

Acute dietary exposure- The 1994-1996 PDP data were used (total number of samples = 1884; number of samples from imports = 912; total number of detects = 29; number of detects from imports = 24 ; range of detected residues = 0.005 - 0.15 ppm, weighted average½ LOD = 0.002592 ppm). Because the number of import samples constituted a large portion of the total samples, the weighted average %CT value of 52% (based on the assumption of 100% crop treated for import samples and 7% maximum %CT estimate for domestic samples, according to BEAD 1999 report) was incorporated into the RDF. Since grapes is considered a partially-blended crop, no decompositing of data were conducted. The RDF contained 29 detected residues, 904 zeros, and 951 repeated ½ LOD values at 0.002592 ppm.

Chronic dietary exposure- The value of 0.001579 ppm was used for the residue input in chronic dietary exposure assessment for grapes. This value was the average of 29 detected residues, 942 zeros, and 913 repeated ½ LOD values; the weighted average %CT, 50% (based on 100% CT for imports and 3% CT for domestic samples) was used for the calculation of the number of ½ LOD values.

Grapes-Juice (PB)

Acute dietary exposure- The 1998 PDP data for grape juice were used (total number of samples = 665; number of samples from imports = 41; total number of detects = 0, weighted average½ LOD = 0.002647 ppm). Because the number of import samples did not constitute a large portion of the total samples, the %CT was not weighed for import samples. The maximum %CT estimate of 7% for domestic samples, according to BEAD 1999 report was used for constructing the RDF. Consequently, the RDF contained 93 zeros and 7 repeated ½ LOD values at 0.002647 ppm.

Chronic dietary exposure- The value of 0.00007941 ppm was used for the residue input in chronic dietary exposure assessment for grapes. This value was the average of 3 repeated ½ LOD values at 0.002647 and 97 zeros; 3% CT for domestic samples was used for the calculation of the number of ½ LOD values.

Hops (B)

Adequate monitoring data are not available for hops. Field trial data from OR and WA (MRID 41336509) representing the 1x rate (4 x 1 lb ai/A, 14-day PHI) were used. Residue in 30 samples of dry cones ranged

[5] Based on the diazinon and metabolite residues from the fig trial, residues were 0.38 ppm for diazinon and 0.012 ppm for diazoxon.

from <0.05 ppm to 0.49 ppm.. Fourteen of the samples contained non-detectable residues (<0.05 ppm). The average of 30 samples was 0.115 ppm.

Acute dietary exposure- The estimated maximum percent crop treated is 84%; therefore, the acute anticipated residue is (0.115 ppm)*(0.84)= 0.096 ppm.

Chronic dietary exposure- The average percent crop treated for hops is 63%; therefore, the chronic anticipated residue is (0.115 ppm)*(0.63)=0.072 ppm.

Kiwi Fruit (NB, PB)

Acute dietary exposure- The 1992-98 FDA data for kiwi were used (total number of samples= 128, total number of detects=0, and ½ LOD= 0.0015). Because there was no information available from BEAD regarding the percentage of treated kiwi fruit, 100%CT was assumed and 0.0015 ppm was used as the anticipated residue.

Chronic dietary exposure- The average value of ½ LOD of 0.0015 ppm was used for the residue input in chronic dietary exposure assessment for kiwi. An estimated 100%CT was assumed.

Mushrooms (PB)

Adequate monitoring data are not available for mushrooms. Field trial data (MRID 42322401) are available for mushrooms treated with diazinon using one pre-spawn application (2.5 lb ai/50 gal), one soil drench application (0.585 lb ai/50 gal) and two post-spawn applications (2.5 and 2.15 lb ai/50 gal). Residues in 13 samples of mushrooms ranged from 0.07 to 0.17 ppm.. In the absence of data, the percent crop treated for mushrooms is assumed to be 100%.

Acute dietary exposure- The RDF for partially-blended mushrooms is comprised of 13 detected residues (0.095, 0.070, 0.097,0.12,0.12,0.12,0.14,0.14,0.13,0.14,0.17,0.12,0.11).

Chronic dietary exposure- The anticipated residue is the average of 13 samples = 0.121 ppm.

Pineapple (B, NB, PB)

Acute dietary exposure- Adequate monitoring data are not available for pineapples. Pineapple grown in Hawaii (MRID 42179501) was treated with diazinon using eight foliar application at a rate of 1 lb ai/A (total of 8 lb ai/A). The pineapples was harvested 7 days after the last application. The estimated 100%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for not-blended/partially-blended contained 15 detected residues (0.011, 0.022, 0.02, 0.044, 0.019, 0.018, 0.035, 0.072, 0.038, 0.032, 0.043, 0.024, 0.043, 0.027, 0.082 ppm).

Pineapple- dried- A point estimate of 0.035 ppm was used for this blended commodity.

Chronic dietary exposure- The average value of 0.035 ppm was used for the residue input in chronic dietary exposure assessment for pineapples. This value was the average of 15 detected residues, assuming 100%CT.

Strawberries (PB)
Acute dietary exposure- The 1998 PDP data for strawberries were used (total number of samples= 610; total number of detects=9, and a weighted average½ LOD= 0.0034). The estimated 16%CT value according to the 1999 BEAD report was incorporated into the RDF. The RDF for partially-blended contained 9 detected residues (0.003-0.03 ppm), 512 zeros, and 89 repeated ½ LOD values at 0.0034 ppm.

Chronic dietary exposure- The average value of 0.00039 ppm was used for the residue input in chronic dietary exposure assessment for strawberries. This value was the average of 9 detected residues, 555 zeros and 46 repeated ½ LOD values. A weighted average 9%CT was used to estimate the number of ½ LOD values.

Watercress (PB)
Acute dietary exposure- A single field trial was conducted in support of SLN Section 24© registration for Hawaii only[6] (MRID 44237101) for diazinon on watercress at a rate of 0.5 lb ai/A and a second application was made 10 days after the first application with a 5 day PHI. The residue value was 0.025 ppm in treated watercress. Because there was no information available from BEAD regarding the percentage of treated watercress, 100%CT was assumed.

Chronic dietary exposure- The value for partially-blended was 0.025 ppm for the residue input in chronic dietary exposure assessment for watercress. This value assumes 100%CT.

Meat, Milk, Poultry and Eggs

Ruminant and poultry feeding studies have been evaluated and a 40 CFR 180.6(a)(3) condition exists for milk, cattle tissues, poultry tissues, and eggs (Diazinon RED). Based on this determination it is assumed that no residues of diazinon occur in these food commodities.

There are dermal uses registered for sheep and these uses are being supported for reregistration. Tolerances have been reassessed based on available sheep dermal studies and existing tolerances of 0.7 ppm for meat and meat byproducts are adequate. It has been recommended that tolerances for sheep fat be increased to 5 ppm. The available sheep dermal studies were reviewed as part of the reregistration process (D. Hrdy, 3/31/98, D234509) and are used for estimation of anticipated residues. The maximum recommended concentration for diazinon in sheep dip is about 250-300 ppm and the minimum interval allowed between treatment and slaughter is 3 days. The maximum reported residues at 3 days were 0.13 ppm in muscle, <0.01 ppm in liver, 0.45 ppm in kidney (2x rate; 1x data not available), and 2.2 ppm in fat. Based on information provided by BEAD, it is assumed that a maximum of approximately 35% of sheep consumption in the U.S. is from imports (D. Atwood, 10/28/99). No information was available on what percent of imported sheep are treated with diazinon; therefore, a conservative estimate of 100% was assumed. An estimate of 3% of domestic sheep treated was assumed based on limited data from BEAD (A. Halvorson, 10/27/99). This estimate was made from data on % head treated in Nebraska, which was

[6] HED accepts the single field trial as being adequate to fulfill guideline OPPTS 860.1500 for watercress and it will be used in the dietary exposure assessment.

the highest value reported from the three states available. The overall % head treated for all sheep consumed was estimated as (consumption of imports)*(100% head treated) + (consumption of domestic)*(3% head treated)= (0.35)(1)+(0.65)(0.03)=37% head treated.

Given the limited extent of data available on the potential for dietary exposure from consumption of sheep, a conservative approach to estimating both acute and chronic exposure was taken. The anticipated residues in both cased was taken as the maximum reported residues at 3 days after treatment with adjustments for the assumption that 37% of sheep commodities consumed would contain these residues.

Food Handling Establishment Uses of Diazinon

Because there is a food/feed handling establishment use for diazinon, which qualifies as a food use, a tolerance for this use must be established and has been recommended at 0.02 ppm. However, based on data submitted to support a food additive petition and associated label restrictions on commercial applicators applying diazinon in food/feed handling establishments, there is no likelihood of residues in food or feed provided label directions are followed. Results from a study designed to test for residues of diazinon on food and feed items, covered and uncovered, as a result of a 1X and 2X labeled application rate in food/feed handling establishments showed that residues were non-detectable (<0.01 ppm) for diazinon, hydroxy diazinon, and diazoxon. It is recommended in the Diazinon RED that a chronic dietary exposure assessment for diazinon be conducted including potential residues from the food/feed handling establishment based on these studies. The normal HED procedure for a use like this is to estimate the chronic exposure assuming that all foods consumed are contaminated at a residue level of ½ the LOD. No information is available concerning the percent of food handling establishments that are treated with diazinon. This assessment is obviously a gross overestimate of dietary exposure to diazinon from food handling establishment uses but is estimated as an upper limit for characterization of the potential dietary exposure.

For purposes of the current assessment we will make the assumption, which is consistent with the preponderance of residue date, that no residues of the metabolites would be expected to occur. Therefore, our assessment will be for diazinon *per se*. Furthermore, we will assume that whatever residue might be present at the 2x application rate will be twice the level expected at the 1x rate. The anticipated residue, based on non-detectable residues of diazinon at the 2x application rate = (½ LOD)/2 = 0.0025 ppm.

Consumption Data

The acute module version 6.78 and the chronic module version 6.76 of DEEM™ were used for these exposure assessments. Human consumption of the various commodities was estimated from the 1989 - 1992 USDA *Continuing Surveys of Food Intake for Individuals*.

Results

The estimate of chronic dietary exposure from uses of Diazinon on food/feed crops and animals is summarized in Table 5. The DEEM inputs and complete chronic analysis are appended to this document as Attachments 2, 3 and 4. For the highest exposed subpopulation (non-hispanic/non-white/non-black) the

major contributors to the estimated exposure were sheep meat and fat (6% of cPAD; 36% of total exposure). The highest contributors to estimated chronic exposure for all infants less than 1 year old were bananas (1.8% of cPAD), pineapples (1.3% of cPAD), apple juice concentrate (0.9% of cPAD), orange juice concentrate(0.9% of cPAD), and pear juice (0.8% of cPAD). For children 1 to 6 years old the highest contributors were mushrooms (2.6% of cPAD), sheep meat and fat (0.7% of cPAD), orange juice concentrate (1.7% of cPAD), apple juice (1.1% of cPAD), and bananas (1.1% of cPAD).

Diazinon food handling establishment tolerances are being recommended; therefore, we are including a discussion of the dietary risk from such uses. There is little basis for conducted such an assessment other than exercising a judgement based on knowledge of the properties of diazinon and the nature of its uses in food handling areas. The use directions on diazinon labels are very detailed and designed to avoid any contact with foods. **Our conclusion is that it is unlikely that any residues of diazinon will occur on foods from these uses as long as it is used according to the label.** Nevertheless, we conducted a DEEM run, which may be useful for approximating a worst-case scenario. The only quantitative data available for such an assessment is a residue study conducted at twice the label rate in a food handling establishment. Residues were non-detectable (<0.01 ppm) on a variety of foods exposed in this test. As an extreme outer limit we assume a residue on exposed food of 0.0025 ppm (½ LOD extrapolated to 1x use rate). We do not have information on what percent of food handling establishments may actually be treated with diazinon so the assumption is made that all food consumed come from treated establishments. The value of 0.0025 ppm was input into all food forms in DEEM except water and all default concentration factors were removed. The results ranged from a low of 0.000034 mg/kg body wt/day (17% of cPAD) for females over 20 years (not pregnant or nursing) to a high of 0.000142 mg/kg body wt/day (71% of cPAD) for children between 1 and 6 years old. The exposure for the total U. S. Population was 0.000051 mg/kg body wt/day (26% of cPAD). In order to estimate a worst-case exposure from this exercise, one needs much more data than we have available to us. The actual usage of diazinon in all types of food handling establishments would have to be considered at the least.

The estimate of acute dietary exposure from uses of Diazinon on food/feed crops and animals is summarized in Table 6. The DEEM inputs and complete Acute analysis are appended to this document as Attachments 5 and 6. The estimated exposures at the 99.9th percentile ranged from a low of 0.000440 mg/kg body wt/day (18% aPAD) for non-nursing/non-pregnant females (13-19) to a high of 0.001606 mg/kg body wt/day (101% aPAD) for non-hispanics/non-white/non-black. An analysis of major contributors to diazinon acute dietary exposure for the highest exposed population group indicated that sheep meat and fat were the major contributors to high exposures in the Monte Carlo analysis. The anticipated residues for these commodities are conservatively high. They are based on a series of controlled dermal treatment studies and represent residues at the 1x label rate with a 3-day or less pre-slaughter interval. This residue value was input with an estimated probability that 37% of the sheep consumed contained this residue level. The contribution of sheep fat and meat to the appearance of higher dietary risk was demonstrated by a second Monte Carlo analysis in which these commodities were excluded from the analysis. These results are summarized in Table 7 and the DEEM analysis is appended as Attachment 7. The estimated acute dietary exposure dropped significantly for those consumers that would be expected to eat sheep. For the non-hispanic-other group the exposure at the 99.9th percentile dropped from 64 % aPAD to 35% aPAD. Overall the exposure at the 99.9th percentile ranged from about

11% aPAD for females 13-19(not pregnant and not nursing) to about 47% aPAD for children 1 to 6 years old.

Table 5. Chronic Dietary Exposure Results for Diazinon.

DEEM Chronic analysis for DIAZINON (1989-92 Consumption data)
Population Adjusted Dose (cPAD) = .0002 mg/kg bw/day Analysis Date 12-21-1999

Total Exposure by Population Subgroup

Population Subgroup	Total Exposure	
	mg/kg body wt/day	Percent of cPAD
U.S. Population (total)	0.000019	9.6%
U.S. Population (spring season)	0.000019	9.7%
U.S. Population (summer season)	0.000018	9.0%
U.S. Population (autumn season)	0.000020	10.2
U.S. Population (winter season)	0.000019	9.7%
Northeast region	0.000022	10.8%
Midwest region	0.000019	9.4%
Southern region	0.000016	7.8%
Western region	0.000024	11.8%
Hispanics	0.000017	8.3%
Non-hispanic whites	0.000020	10.0%
Non-hispanic blacks	0.000014	7.1%
Non-hisp/non-white/non-black)	0.000033	16.5%
All infants (< 1 year)	0.000020	9.8%
Nursing infants	0.000015	7.4%
Non-nursing infants	0.000022	10.9%
Children 1-6 yrs	0.000027	13.4%
Children 7-12 yrs	0.000016	8.0%
Females 13-19(not preg or nursing)	0.000010	4.9%
Females 20+ (not preg or nursing)	0.000020	10.1%
Females 13-50 yrs	0.000017	8.7%
Females 13+ (preg/not nursing)	0.000014	7.0%
Females 13+ (nursing)	0.000024	12.1%
Males 13-19 yrs	0.000009	4.4%
Males 20+ yrs	0.000020	9.9%
Seniors 55+	0.000023	11.4%
Pacific Region	0.000024	12.1%

Table 6. Summary of Acute Dietary Exposure From Uses of Diazinon on Food Crops and Sheep.

Acute Reference Dose (aRfD) = 0.002500 mg/kg body-wt/day
NOEL (Acute) = 0.250000 mg/kg body-wt/day
MC iterations = 1000 MC list in residue file MC seed = 10

	5th Percentile			1st Percentile			0.1st Percentile		
	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE
U.S. pop - all seasons:	0.000071	2.84	3515	0.000191	7.65	1306	0.000881	35.24	283
U.S. pop - spring season:	0.000075	3.01	3326	0.000176	7.06	1416	0.000726	29.03	344
U.S. pop - summer season:	0.000067	2.70	3708	0.000181	7.26	1377	0.000906	36.25	275
U.S. pop - autumn season:	0.000076	3.02	3308	0.000212	8.48	1179	0.000867	34.68	288
U.S. pop - winter season:	0.000067	2.68	3732	0.000197	7.87	1270	0.001062	42.48	235
Northeast region:	0.000077	3.08	3245	0.000227	9.08	1101	0.001065	42.59	234
Midwest region:	0.000071	2.83	3539	0.000173	6.92	1445	0.000671	26.83	372
Southern region:	0.000057	2.30	4352	0.000146	5.82	1717	0.000724	28.94	345
Western region:	0.000092	3.67	2725	0.000250	10.02	998	0.001114	44.55	224
Hispanics:	0.000059	2.35	4256	0.000164	6.56	1525	0.001073	42.92	232
Non-hispanic whites:	0.000074	2.96	3373	0.000191	7.63	1310	0.000815	32.61	306
Non-hispanic blacks:	0.000058	2.33	4294	0.000152	6.07	1646	0.000682	27.30	366
Non-hispanic other:	0.000117	4.67	2140	0.000497	19.88	503	0.001606	64.23	155
All infants (<1 year):	0.000100	4.01	2496	0.000244	9.75	1025	0.000688	27.52	363
Nursing infants (<1 year):	0.000100	3.99	2507	0.000219	8.74	1143	0.000745	29.80	335
Non-nursing infants (<1 yr):	0.000100	3.98	2512	0.000249	9.94	1005	0.000669	26.74	373
Children (1-6 years):	0.000107	4.29	2331	0.000334	13.36	748	0.001499	59.97	166
Children (7-12 years):	0.000070	2.80	3571	0.000181	7.25	1379	0.000687	27.48	363
Females (13+/preg/not nsg):	0.000058	2.32	4307	0.000159	6.36	1571	0.000925	37.00	270
Females (13+/nursing):	0.000113	4.51	2215	0.000313	12.52	798	0.000566	22.63	441
Females (13-19 yrs/np/nn):	0.000044	1.76	5676	0.000124	4.97	2012	0.000440	17.62	567

Females (20+ years/np/nn):

0.000070	2.79	3586	0.000177	7.08	1412	0.000855	34.19	292

Females (13-50 years):

0.000066	2.65	3766	0.000172	6.86	1457	0.000854	34.18	292

Males (13-19 years):

0.000036	1.44	6937	0.000127	5.10	1961	0.000585	23.38	427

Males (20+ years):

0.000066	2.65	3771	0.000189	7.55	1324	0.000909	36.38	274

Seniors (55+):

0.000069	2.75	3638	0.000210	8.39	1192	0.000908	36.32	275

Pacific Region:

0.000096	3.85	2594	0.000244	9.76	1024	0.001104	44.15	226

Table 7. Summary of Acute Dietary Exposure From Uses of Diazinon Excluding Sheep.

Acute Reference Dose (aRfD) = 0.002500 mg/kg body-wt/day
NOEL (Acute) = 0.250000 mg/kg body-wt/day
MC iterations = 1000 MC list in residue file MC seed = 10
Run Comment: Acute analysis with **all sheep commodities removed**

	5th Percentile			1st Percentile			0.1st Percentile		
	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE
U.S. pop - all seasons:	0.000068	2.72	3672	0.000167	6.68	1497	0.000660	26.42	378
U.S. pop - spring season:	0.000073	2.92	3419	0.000164	6.55	1526	0.000461	18.44	542
U.S. pop - summer season:	0.000065	2.59	3860	0.000156	6.24	1603	0.000641	25.64	390
U.S. pop - autumn season:	0.000071	2.82	3544	0.000181	7.23	1383	0.000651	26.03	384
U.S. pop - winter season:	0.000065	2.61	3838	0.000166	6.63	1508	0.000919	36.77	271
Northeast region:	0.000071	2.83	3538	0.000182	7.26	1377	0.000612	24.47	408
Midwest region:	0.000069	2.78	3601	0.000161	6.44	1553	0.000543	21.72	460
Southern region:	0.000057	2.28	4377	0.000142	5.67	1764	0.000643	25.70	389
Western region:	0.000084	3.36	2978	0.000197	7.89	1268	0.000938	37.52	266
Hispanics:	0.000057	2.27	4407	0.000141	5.64	1774	0.000808	32.30	309
Non-hispanic whites:	0.000071	2.86	3500	0.000172	6.88	1453	0.000656	26.23	381
Non-hispanic blacks:	0.000057	2.27	4406	0.000136	5.44	1836	0.000530	21.19	471
Non-hispanic other:	0.000072	2.89	3455	0.000206	8.24	1213	0.000870	34.78	287
All infants (<1 year):	0.000097	3.90	2564	0.000229	9.14	1093	0.000658	26.33	379
Nursing infants (<1 year):	0.000103	4.10	2436	0.000232	9.27	1078	0.000739	29.57	338
Non-nursing infants (<1 yr):	0.000097	3.87	2581	0.000230	9.22	1084	0.000635	25.39	393
Children (1-6 years):	0.000105	4.18	2390	0.000300	11.98	834	0.001187	47.47	210
Children (7-12 years):	0.000068	2.72	3672	0.000171	6.83	1463	0.000597	23.89	418
Females (13+/preg/not nsg):	0.000054	2.16	4634	0.000134	5.36	1864	0.000350	13.98	715
Females (13+/nursing):	0.000102	4.10	2439	0.000295	11.80	847	0.000533	21.33	468
Females (13-19 yrs/np/nn):									

0.000043	1.72	5800	0.000113	4.53	2208	0.000274	10.95	913
Females (20+ years/np/nn):								
0.000068	2.71	3688	0.000161	6.42	1557	0.000691	27.64	361
Females (13-50 years):								
0.000065	2.60	3850	0.000161	6.45	1549	0.000603	24.14	414
Males (13-19 years):								
0.000035	1.41	7096	0.000120	4.78	2090	0.000516	20.66	484
Males (20+ years):								
0.000063	2.51	3989	0.000150	6.01	1663	0.000545	21.80	458
Seniors (55+):								
0.000064	2.57	3890	0.000157	6.27	1593	0.000691	27.62	362
Pacific Region:								
0.000090	3.62	2763	0.000211	8.43	1186	0.001003	40.14	249

List of Attachments

Attachment 1: EPA Quantitative Usage Analysis of Diazinon (A. Halverson, 1/29/99)
Attachment 2: Chronic Residue Input Data for DEEM Analysis
Attachment 3: Chronic DEEM Analysis for Diazinon
Attachment 4: Chronic Critical Commodity Contribution Analysis for Three Population Groups
Attachment 5: Acute Residue Input for DEEM Monte Carlo Analysis
Attachment 6: Acute DEEM Analysis for Diazinon
Attachment 7: Acute DEEM Analysis for Diazinon Excluding Contribution from Consumption of Sheep

cc: WSmith (CEB1), SPiper (CEB1), MSahafeyen (CEB1), RF.
7509C:CEB1:WSmith:Rm 810C:CM2: 703-305-5353: 12/22/99.

Quantitative Usage Analysis for Diazinon

Case Number: 0238 PC Code: 57801
Date: 1-29-99 Analyst: Alan Halvorson

Based on available pesticide usage information mainly for 1987 through 1996, but also taking into account 1997 data, total annual domestic usage of diazinon is approximately 6 million pounds active ingredient (a.i.). In terms of pounds a.i., total diazinon usage is allocated mainly to outdoor by consumers (39%), lawn care operators (19%) and pest control operators (11%). Sites with a high percentage of total U.S. acreage treated include Brussels sprouts (90%), hops (63%), nectarines (54%), apricots (52%), cranberries (48%), Romaine lettuce (45%), plums (39%), prunes (36%) and beets(35%). For agriculture, rates per application and rates per year are generally less than 3 and 4 pounds a.i. per acre, respectively, while for non-agriculture, corresponding rates apparently are generally less than 4 and 8 pounds a.i. per acre, respectively. States with significant usage include California, Florida and Texas.

Diazinon Case #: 0238 AI #: 57801 EPA QUANTITATIVE USAGE ANALYSIS Analyst: Alan Halvorson 1-29-99

Site	Acres (000) Grown	Acres Treated (000) Wtd Ave	Acres Treated (000) Est Max	% Crop Treated Wtd Ave	% Crop Treated Est Max	Lbs AI Applied (000) Wtd Ave	Lbs AI Applied (000) Est Max	Average Application Rates lb ai/ A/yr	Average Application Rates # appl/ year	Average Application Rates lb ai/ A/appl	States of Most Usage (% of total lb ai used by these states)
Alfalfa	23,949	58	129	0%	1%	39	92	0.7	1.5	0.4	CA AZ MO NM CO PA 81%
Almonds	429	85	130	20%	30%	170	329	2.0	1.2	1.7	CA 100%
Apples	572	20	33	4%	6%	37	62	1.8	1.5	1.2	CA WA MO ID MT OR 74%
Barley	7,505	1	2	0%	0%	2	3	1.5	1.0	1.5	ID 100%
Beans, Snap, Fresh	75	1	2	1%	3%	1	5	2.0	1.2	1.7	CA FL 100%
Beans, Snap, Proc.	188	8	15	4%	8%	5	9	0.6	1.1	0.5	OR 100%
Beets	12	4	6	35%	53%	4	6	1.0	-	-	NY 88%
Berries	161	25	43	16%	27%	57	103	2.2	1.6	1.4	MA CA NJ 91%
- Blackberries	5	1	1	18%	23%	1	2	1.2	1.0	1.2	OR 84%
- Blueberries	59	3	6	6%	11%	3	5	0.8	1.0	0.8	NJ OR 82%
- Boysenberries	-	-	-	-	-	0	0	-	-	-	-
- Cranberries	29	14	21	48%	73%	35	53	2.5	-	-	MA WI 89%
- Raspberries	11	3	5	25%	45%	4	8	1.5	1.1	1.4	WA OR MI 97%
- Strawberries	50	4	8	9%	16%	8	16	1.7	2.5	0.7	CA FL WI 80%
Bulb Vegetables	198	17	22	8%	11%	33	82	2.0	2.2	0.9	TX CA NY WI 88%
- Onions, Dry	144	16	24	11%	16%	25	38	1.6	1.8	0.9	CA TX GA NY 89%
- Onions, Green	14	1	3	8%	23%	1	2	0.8	-	-	CA 100%
Cabbage, Chinese	9	-	-	-	-	2	4	-	-	-	-
Cantaloupes	113	14	20	12%	18%	7	11	0.5	-	-	CA TX 91%
Carrots	108	11	21	10%	20%	18	36	1.7	1.5	1.1	FL MI CA WA TX 85%
Celery	35	4	5	10%	15%	4	8	1.1	1.8	0.6	CA TX 86%
Cherries, Sweet	47	8	14	17%	29%	18	26	2.2	1.4	1.6	CA WA 83%
Cherries, Tart	49	1	3	2%	6%	1	4	1.5	1.4	1.1	OR 82%
Citrus, Other	51	0	0	0%	1%	0	0	1.2	1.2	1.0	FL 100%
Cole Crops	313	26	64	8%	20%	26	61	1.0	1.4	0.7	CA AZ TX MI NM FL 74%
- Broccoli	111	12	23	11%	21%	12	25	1.1	1.2	0.9	CA AZ TX 82%
- Brussels Sprouts	3	3	3	90%	100%	2	2	0.6	-	-	-
- Cabbage, Fresh	74	8	12	11%	17%	13	19	1.6	1.5	1.1	TX CA FL 95%
- Cabbage, Proc.	6	1	2	13%	31%	1	2	1.1	1.0	1.1	WI 86%
- Cauliflower	58	9	18	16%	31%	5	11	0.6	1.0	0.6	CA AZ FL 87%
- Collards	11	2	3	19%	28%	2	3	0.9	-	-	FL CA SC 95%
- Greens	2	0	1	20%	39%	0	0	0.5	1.0	0.5	MI 100%
Corn	71,264	38	99	0%	0%	26	72	0.7	1.0	0.7	CA NE KS WA MO OH 71%
Cotton	12,429	15	26	0%	0%	14	29	1.0	1.0	0.9	TN AR LA MO CA 82%
Cucumbers, Fresh	52	2	3	4%	7%	2	3	0.8	1.5	0.5	CA TX FL 88%
Cucumbers, Proc.	97	5	11	5%	12%	5	12	1.1	1.2	0.9	TX FL 100%
Eggplant	4	0	1	6%	18%	0	1	1.2	1.5	0.8	FL 100%
Endive	-	-	-	-	-	1	2	-	-	-	-
Figs	14	2	4	17%	26%	5	8	2.1	-	-	-
Flax	188	0	0	0%	0%	-	-	-	-	-	-
Grapefruit	194	4	9	2%	4%	5	11	1.3	1.5	0.9	FL CA 97%
Grapes	825	22	58	3%	7%	21	45	1.0	1.2	0.9	CA AZ WA TX 83%
Hay, Other	33,427	7	23	0%	0%	8	25	1.0	1.4	0.8	AZ CA TX NC 81%
Honeydew	27	1	3	5%	10%	1	2	0.9	1.1	0.8	TX CA 100%
Hops	40	25	33	63%	84%	41	54	1.6	-	-	-
Idle Cropland (*)	7,461	17	166	0%	2%	20	197	1.2	1.0	1.2	CO 92%

Site	Acres (000) Grown	Acres Treated (000) Wtd Ave	Acres Treated (000) Est Max	% Crop Treated Wtd Ave	% Crop Treated Est Max	Lbs AI Applied (000) Wtd Ave	Lbs AI Applied (000) Est Max	Average Application Rates lb ai/ A/yr	Average Application Rates # appl/ year	Average Application Rates lb ai/ A/appl	States of Most Usage (% of total lb ai used by these states)
Kale	6	-	-	-	-	1	1	-	-	-	-
Lemons	63	0	1	0%	1%	0	0	0.3	1.8	0.2	CA FL 100%
Lettuce, Head	204	57	80	28%	39%	45	63	0.8	1.5	0.5	CA 81%
Lettuce, Other	58	18	30	32%	52%	14	25	0.8	1.5	0.5	CA 90%
- Lettuce, Romaine	2	1	1	45%	68%	1	1	0.9	1.1	0.8	-
Lots/Farmsteads/etc	24,815	14	28	0%	0%	20	48	1.4	2.0	0.7	TX ID VA CA FL KS 58%
Nut Trees, Other	100	2	5	2%	5%	7	14	3.2	1.9	1.7	OR CA 98%
- Filberts	27	2	3	6%	12%	3	6	1.7	-	-	-
Oats/Rye (*)	6,133	1	4	0%	0%	1	4	1.0	1.0	1.0	PA WA 82%
Oranges	867	8	23	1%	3%	21	42	2.7	1.6	1.7	FL 86%
Parsley	2	0	0	4%	8%	0	0	1.5	-	-	-
Pasture (*)	86,960	10	28	0%	0%	9	27	0.9	1.4	0.6	AL MS MO ID 84%
Pasture/Rangeland, Other	-	5	11	-	-	11	21	2.0	2.1	0.9	TX LA 83%
Peaches	212	26	43	12%	20%	61	102	2.4	1.3	1.9	CA 82%
Peanuts	1,610	3	9	0%	1%	4	17	1.2	1.0	1.2	GA NC 85%
Pears	78	8	15	11%	19%	16	29	2.0	1.2	1.6	CA WA OR 92%
Peas/Beans, Dry	2,181	7	18	0%	1%	6	17	0.8	1.3	0.6	CO WA MI 83%
- Peas, Dry	249	5	10	2%	4%	2	3	0.4	-	-	CA 81%
Peas, Green	386	16	32	4%	8%	8	16	0.5	-	-	OR WA FL CA 82%
- Peas, Green, Proc.	277	4	15	1%	5%	5	17	1.1	1.2	1.0	WA OR 100%
Pecans	488	9	27	2%	5%	85	253	9.0	3.2	2.8	AL TX 86%
Peppers, Bell	59	5	11	8%	19%	9	20	1.8	1.7	1.0	FL CA 90%
Peppers, Hot	23	0	0	0%	1%	0	0	1.0	-	-	CA 100%
Plums	64	25	35	39%	54%	64	89	2.6	1.0	2.5	CA 99%
Potatoes	1,421	8	16	1%	1%	13	27	1.7	1.2	1.4	ID WA NY MI ME 83%
Prunes	80	29	51	36%	64%	66	116	2.3	1.1	2.2	-
Pumpkins	36	1	2	1%	5%	0	1	0.5	3.3	0.2	MI 80%
Radishes	37	1	3	4%	7%	2	4	1.3	-	-	OR MI CA 89%
Rice	2,921	1	1	0%	0%	0	1	0.4	1.0	0.4	CA FL 100%
Setaside Acres (*)	21,802	2	439	0%	2%	2	439	1.0	1.5	0.7	CA UT 95%
Sod	152	0	1	0%	0%	0	1	0.8	-	-	OH 100%
Sorghum	11,280	3	8	0%	0%	2	4	0.6	1.0	0.6	MO AR NE LA MS 81%
Soybeans	61,279	8	35	0%	0%	5	9	0.6	1.0	0.6	AL OH IN 81%
Spinach, Fresh	16	4	7	22%	44%	6	11	1.6	1.7	1.0	CA TX 94%
Spinach, Processing	8	2	5	24%	60%	2	6	1.2	1.1	1.1	TX 100%
Squash	53	2	5	4%	9%	2	4	0.7	-	-	CA 100%
Stone Fruit, Other	189	26	39	14%	21%	62	89	2.4	1.3	1.8	CA 91%
- Apricots	19	10	13	52%	68%	29	40	2.9	1.4	2.1	-
- Nectarines	29	16	29	54%	100%	51	108	3.2	1.4	2.3	-
- Olives	30	1	1	2%	4%	0	1	0.5	-	-	-
Sugar Beets	1,415	34	81	2%	6%	34	77	1.0	1.6	0.6	CA MI ID 94%
Sugarcane (*)	852	5	19	1%	2%	10	36	1.9	1.9	1.0	FL 100%
Sunflower (*)	2,745	0	0	0%	0%	0	0	1.0	1.0	1.0	AZ CA 100%
Sweet Corn, Fresh	195	17	25	9%	13%	48	73	2.9	2.5	1.2	FL CA 91%
Sweet Potatoes	85	7	11	9%	13%	21	32	2.9	-	-	NC GA CA 82%
Tobacco	695	10	20	1%	3%	14	28	1.5	1.2	1.2	NC SC KY OH TN 85%
Tomatoes, Fresh	116	4	9	4%	7%	7	14	1.6	3.7	0.4	FL CA 92%

Site	Acres (000) Grown	Acres Treated (000) Wtd Ave	Acres Treated (000) Est Max	% Crop Treated Wtd Ave	% Crop Treated Est Max	Lbs AI Applied (000) Wtd Ave	Lbs AI Applied (000) Est Max	Average Application Rates lb ai/ A/yr	Average Application Rates # appl/ year	Average Application Rates lb ai/ A/appl	States of Most Usage (% of total lb ai used by these states)
Tomatoes, Proc.	324	29	69	9%	21%	18	44	0.6	1.3	0.5	CA 100%
Walnuts	205	14	28	7%	14%	33	65	2.4	1.4	1.7	CA 98%
Watermelons	258	6	12	2%	5%	5	11	0.9	-	-	CA TX AZ 87%
Wheat, Spring (*)	20,799	1	1	0%	0%	0	0	0.1	1.0	0.1	WA 100%
Wheat, Winter	43,282	9	30	0%	0%	8	27	0.8	1.0	0.8	CA OR NE SC 80%
Woodland (*)	62,825	1	6	0%	0%	1	4	0.6	1.5	0.4	MN GA WI 82%
Cemeteries	493	<9	<13	<2%	<3%	23	42	>2.7	-	2.7	-
Educational Facilities	1,420	<35	<56	<3%	<4%	84	114	>2.4	-	2.4	-
Horticulture	518	39	53	8%	10%	192	314	4.9	3.6	1.4	-
Landscape Contractors	22,128	9	22	0%	0%	33	38	3.5	1.8	1.9	-
Lawn Care Operators	31,048	137	177	0%	1%	1,135	1,294	8.3	2.2	3.7	-
Offc/Retail Indoor by CPA	-	-	-	-	-	20	30	-	-	-	-
Offc/Retail Outdr by CPA	-	-	-	-	-	100	126	-	-	-	-
Outdoor by Consumer	-	-	-	-	-	2,290	2,338	-	-	-	-
Parks	2,457	<29	<32	<1%	<2%	110	129	>3.8	-	3.8	-
Pest Control Operators	-	-	-	-	-	621	1,261	-	-	-	-
Recreation Outdoor by CPA	-	-	-	-	-	11	15	-	-	-	-
Residential Indoor by CPA	-	-	-	-	-	149	220	-	-	-	-
Residential Outdr by CPA	-	-	-	-	-	716	855	-	-	-	-
Roadways	11,500	<21	<32	0%	0%	25	37	>1.2	-	1.2	-
Whlsale/Manu Indr by CPA	-	-	-	-	-	11	20	-	-	-	-
Whlsale/Manu Outdr by CPA	-	-	-	-	-	13	20	-	-	-	-
TOTAL						5,830	8,778				

NOTES ON COLUMN HEADINGS
- Weighted average--the most recent years and more reliable data are weighted more heavily.
- Average application rates are calculated from the weighted averages.

NOTES ON TABLE DATA
- Usage estimates primarily based on 1987 - 1996 for agriculture and 1992 - 1997 for non-agriculture.
- A star (*) after an agricultural site name indicates that no usage for this site was found for 1997.
- Calculations of the above numbers may not appear to agree because they are displayed as rounded:
  to the nearest 1000 for acres treated or lb. a.i. (Therefore 0 = < 500.)
  to the nearest whole percentage point for % of crop treated. (Therefore 0% = < 0.5%.)
- A dash (-) indicates that information on this site is NOT available in EPA sources or is insufficient.

NOTES ON CROP/SITE GROUPS AND ABBREVIATIONS
- Bulb Vegetables include garlic, leeks, and onions.
- Cole Crops include broccoli, Brussels sprouts, cabbage, cauliflower, mustard greens, collards, bok choy, and chard.
- Nut Trees, Other include chestnuts, filberts, hazelnuts, hickory nuts, macadamia nuts, pistachios, lychie nuts, and palm.
- Stone Fruit, Other include apricots, avocados, dates, nectarines, olives, coconuts, mangoes, and feijoa.
- CPA = Certified Commercial Pesticide Applicators.
- Several non-agricultural sites overlap.

AGRICULTURE SOURCES
- EPA proprietary sources, 1987 - 1997
- USDA/NASS, 1990 - 1997
- NCFAP
- California, 1993 - 1995

NON-AGRICULTURE SOURCES
- EPA proprietary sources, 1991 - 1997
- Kline & Co., 1991 - 1995

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for DIAZINON 1989-92 data
Residue file: C:\deem96\diazinon\diazinon-chronic-rev.R96 Adjust. #2 used
Analysis Date 12-21-1999 Residue file dated: 12-20-1999/08:24:39/8
Reference dose (RfD) = 0.0002 mg/kg bw/day
Comment:Chronic RfD from HIARC doc. of 9/21/99

Food Code	Crop Grp	Food Name	RESIDUE (ppm)	Adj.Factors #1	#2
1	13A	Blackberries	0.000205	1.000	1.000
2	13A	Boysenberries	0.000240	1.000	1.000
3	13A	Dewberries	0.000240	1.000	1.000
4	13A	Loganberries	0.000240	1.000	1.000
5	13A	Raspberries	0.000630	1.000	1.000
6	13A	Youngberries	0.000240	1.000	1.000
7	13B	Blueberries	0.000090	1.000	1.000
8	O	Cranberries	0.043500	1.000	1.000
9	O	Cranberries-juice	0.043500	1.100	1.000
13	O	Grapes	0.001580	1.000	1.000
14	O	Grapes-raisins	0.001580	0.130	1.000
15	O	Grapes-juice	0.000080	1.000	1.000
17	O	Strawberries	0.000390	1.000	1.000
20	10	Citrus citron	0.000031	1.000	1.000
22	10	Grapefruit-peeled fruit	0.000062	1.000	1.000
23	10	Grapefruit-juice	0.001440	1.000	1.000
24	10	Kumquats	0.000031	1.000	1.000
26	10	Lemons-peeled fruit	0.000031	1.000	1.000
27	10	Lemons-peel	0.007000	1.000	1.000
28	10	Lemons-juice	0.001440	1.000	1.000
30	10	Limes-peeled fruit	0.000031	1.000	1.000
31	10	Limes-peel	0.007000	1.000	1.000
32	10	Limes-juice	0.001440	1.000	1.000
33	10	Oranges-juice-concentrate	0.001440	3.700	1.000
34	10	Oranges-peeled fruit	0.000031	1.000	1.000
35	10	Oranges-peel	0.007000	1.000	1.000
36	10	Oranges-juice	0.001440	1.000	1.000
37	10	Tangelos	0.000031	1.000	1.000
38	10	Tangerines	0.000031	1.000	1.000
39	10	Tangerines-juice	0.001440	1.000	1.000
40	14	Almonds	0.001000	1.000	1.000
44	14	Filberts (hazelnuts)	0.000440	1.000	1.000
48	14	Walnuts	0.000350	1.000	1.000
52	11	Apples	0.000542	1.000	1.000
53	11	Apples-dried	0.000542	8.000	1.000
54	11	Apples-juice/cider	0.000816	1.000	1.000
56	11	Pears	0.001068	1.000	1.000
57	11	Pears-dried	0.001068	6.250	1.000
59	12	Apricots			
		11-Uncooked	0.003710	1.000	1.000
		12-Cooked: NFS	0.003710	1.000	1.000
		14-Boiled	0.003710	1.000	1.000
		31-Canned: NFS	0.001810	1.000	1.000
		34-Canned: Boiled	0.001810	1.000	1.000

60	12	Apricots-dried	0.003710	6.000	1.000
61	12	Cherries	0.001050	1.000	1.000
62	12	Cherries-dried	0.001050	4.000	1.000
63	12	Cherries-juice	0.001050	1.500	1.000
64	12	Nectarines	0.003000	1.000	1.000
65	12	Peaches			
		11-Uncooked	0.002100	1.000	1.000
		12-Cooked: NFS	0.002100	1.000	1.000
		13-Baked	0.002100	1.000	1.000
		14-Boiled	0.002100	1.000	1.000
		31-Canned: NFS	0.000416	1.000	1.000
		41-Frozen: NFS	0.000416	1.000	1.000
66	12	Peaches-dried	0.002100	7.000	1.000
67	12	Plums (damsons)	0.000585	1.000	1.000
68	12	Plums-prunes (dried)	0.000585	0.600	1.000
69	12	Plums/prune-juice	0.000585	1.400	1.000
72	O	Bananas	0.002800	1.000	1.000
73	O	Bananas-dried	0.002800	3.900	1.000
78	O	Figs	0.048000	1.000	1.000
89	O	Pineapples-peeled fruit	0.035000	1.000	1.000
90	O	Pineapples-dried	0.035000	5.000	1.000
91	O	Pineapples-juice	0.035000	0.120	1.000
94	O	Plantains-ripe	0.002800	1.000	1.000
97	O	Kiwi fruit	0.001500	1.000	1.000
112	O	Coffee	0.200000	1.000	1.000
125	O	Hops	0.072000	1.000	1.000
141	9A	Melons-cantaloupes-juice	0.000340	1.000	1.000
142	9A	Melons-cantaloupes-pulp	0.000340	1.000	1.000
143	9A	Casabas	0.000340	1.000	1.000
144	9A	Crenshaws	0.000340	1.000	1.000
145	9A	Melons-honeydew	0.000230	1.000	1.000
146	9A	Melons-persian	0.000340	1.000	1.000
147	9A	Watermelon	0.000030	1.000	1.000
148	9B	Cucumbers			
		11-Uncooked	0.000250	1.000	1.000
		34-Canned: Boiled	0.000270	1.000	1.000
		60-Canned: Cured	0.000270	1.000	1.000
150	9B	Squash-summer	0.000270	1.000	1.000
151	9B	Squash-winter	0.000600	1.000	1.000
152	9B	Bitter melon	0.000340	1.000	1.000
155	8	Peppers-sweet(garden)	0.001700	1.000	1.000
156	8	Peppers-chilli incl jalapeno	0.000860	1.000	1.000
157	8	Peppers-other	0.001700	1.000	1.000
158	8	Pimientos	0.001700	1.000	1.000
159	8	Tomatoes-whole			
		11-Uncooked	0.001030	1.000	1.000
		12-Cooked: NFS	0.001030	1.000	1.000
		13-Baked	0.001030	1.000	1.000
		14-Boiled	0.001030	1.000	1.000
		15-Fried	0.001030	1.000	1.000
		31-Canned: NFS	0.000327	1.000	1.000
		32-Canned: Cooked	0.000327	1.000	1.000
		33-Canned: Baked	0.000327	1.000	1.000
		34-Canned: Boiled	0.000327	1.000	1.000

42-Frozen: Cooked 0.000327 1.000 1.000
160 8 Tomatoes-juice 0.000327 0.050 1.000
161 8 Tomatoes-puree 0.000327 0.700 1.000
162 8 Tomatoes-paste 0.000327 0.600 1.000
163 8 Tomatoes-catsup 0.000327 0.300 1.000
165 2 Beets-garden-tops(greens) 0.002870 1.000 1.000
166 4B Celery 0.004170 1.000 1.000
168 5A Broccoli 0.000310 1.000 1.000
169 5A Brussels sprouts 0.002500 1.000 1.000
170 5A Cabbage-green and red
11-Uncooked 0.000370 1.000 1.000
12-Cooked: NFS 0.000370 1.000 1.000
13-Baked 0.000370 1.000 1.000
14-Boiled 0.000370 1.000 1.000
15-Fried 0.000370 1.000 1.000
31-Canned: NFS 0.000400 1.000 1.000
32-Canned: Cooked 0.000400 1.000 1.000
51-Cured: NFS (smoked/pickled/saltd)
0.000400 1.000 1.000
171 5A Cauliflower 0.000240 1.000 1.000
172 5B Collards 0.004390 1.000 1.000
174 5B Kale 0.004410 1.000 1.000
175 5A Kohlrabi 0.001500 1.000 1.000
176 4A Lettuce-leafy varieties 0.001680 1.000 1.000
177 4A Dandelion-greens 0.008215 1.000 1.000
178 4A Endive-curley and escarole 0.003610 1.000 1.000
182 4A Lettuce-unspecified 0.001360 1.000 1.000
183 5B Mustard greens 0.002100 1.000 1.000
184 4A Parsley 0.000328 1.000 1.000
186 4A Spinach
11-Uncooked 0.001800 1.000 1.000
12-Cooked: NFS 0.001800 1.000 1.000
14-Boiled 0.001800 1.000 1.000
31-Canned: NFS 0.000955 1.000 1.000
32-Canned: Cooked 0.000955 1.000 1.000
34-Canned: Boiled 0.000955 1.000 1.000
42-Frozen: Cooked 0.001800 1.000 1.000
44-Frozen: Boiled 0.001800 1.000 1.000
187 4B Swiss chard 0.004170 1.000 1.000
188 2 Turnips-tops 0.008215 1.000 1.000
189 O Watercress 0.025000 1.000 1.000
192 4A Lettuce-head varieties 0.001260 1.000 1.000
197 1AB Beets-garden-roots 0.000525 1.000 1.000
198 1AB Carrots 0.000650 1.000 1.000
202 3 Garlic 0.000160 1.000 1.000
204 3 Leeks 0.000120 1.000 1.000
205 3 Onions-dry-bulb (cipollini) 0.000210 1.000 1.000
206 3 Onions-dehydrated or dried 0.000210 9.000 1.000
207 1C Potatoes/white-whole 0.000023 1.000 1.000
208 1C Potatoes/white-unspecified 0.000023 1.000 1.000
209 1C Potatoes/white-peeled 0.000023 1.000 1.000
210 1C Potatoes/white-dry 0.000023 6.500 1.000
211 1C Potatoes/white-peel only 0.000023 1.000 1.000
212 1AB Radishes-roots 0.000364 1.000 1.000

214 1AB Rutabagas-roots 0.005910 1.000 1.000
217 3 Shallots 0.000210 1.000 1.000
218 1CD Sweet potatoes (incl yams) 0.000210 1.000 1.000
219 1AB Turnips-roots 0.005910 1.000 1.000
220 1AB Parsnips 0.005910 1.000 1.000
233 6B Beans-succulent-lima
11-Uncooked 0.001200 1.000 1.000
12-Cooked: NFS 0.001200 1.000 1.000
14-Boiled 0.001200 1.000 1.000
32-Canned: Cooked 0.000100 1.000 1.000
42-Frozen: Cooked 0.000200 1.000 1.000
44-Frozen: Boiled 0.000200 1.000 1.000
234 6A Beans-succulent-green
11-Uncooked 0.001200 1.000 1.000
12-Cooked: NFS 0.001200 1.000 1.000
14-Boiled 0.001200 1.000 1.000
31-Canned: NFS 0.000100 1.000 1.000
32-Canned: Cooked 0.000100 1.000 1.000
34-Canned: Boiled 0.000100 1.000 1.000
42-Frozen: Cooked 0.000200 1.000 1.000
44-Frozen: Boiled 0.000200 1.000 1.000
51-Cured: NFS (smoked/pickled/saltd)
0.000100 1.000 1.000
235 6A Beans-succulent-other 0.001200 1.000 1.000
236 6A Beans-succulent-yellow/wax
14-Boiled 0.001200 1.000 1.000
32-Canned: Cooked 0.000100 1.000 1.000
42-Frozen: Cooked 0.000200 1.000 1.000
238 15 Corn/sweet
11-Uncooked 0.000200 1.000 1.000
12-Cooked: NFS 0.000200 1.000 1.000
13-Baked 0.000200 1.000 1.000
14-Boiled 0.000200 1.000 1.000
32-Canned: Cooked 0.000190 1.000 1.000
34-Canned: Boiled 0.000190 1.000 1.000
35-Canned: Fried 0.000190 1.000 1.000
42-Frozen: Cooked 0.000019 1.000 1.000
241 6AB Peas (garden)-green
11-Uncooked 0.002200 1.000 1.000
12-Cooked: NFS 0.002200 1.000 1.000
13-Baked 0.002200 1.000 1.000
14-Boiled 0.002200 1.000 1.000
15-Fried 0.002200 1.000 1.000
31-Canned: NFS 0.000024 1.000 1.000
32-Canned: Cooked 0.000024 1.000 1.000
34-Canned: Boiled 0.000024 1.000 1.000
42-Frozen: Cooked 0.000246 1.000 1.000
44-Frozen: Boiled 0.000246 1.000 1.000
45-Frozen: Fried 0.000246 1.000 1.000
250 6B Beans-succulent-broadbeans 0.001200 1.000 1.000
257 Beans-succulent-hyacinth 0.001200 1.000 1.000
261 O Mushrooms 0.121000 1.000 1.000
262 3 Onions-green 0.000120 1.000 1.000
275 15 Sorghum (including milo) 0.000200 1.000 1.000

282	1A	Sugar-beet	0.000030	1.000	1.000
290	O	Cottonseed-oil	0.002000	2.200	1.000
291	O	Cottonseed-meal	0.002000	0.440	1.000
315	O	Grapes-wine and sherry	0.001580	1.000	1.000
336	M	Sheep-meat byproducts	0.450000	1.000	0.370
337	M	Sheep-other organ meats	0.450000	1.000	0.370
338	M	Sheep-fat w/o bone	2.200000	1.000	0.370
339	M	Sheep-kidney	0.450000	1.000	0.370
340	M	Sheep-liver	0.005000	1.000	0.370
341	M	Sheep-lean (fat free) w/o bone	0.130000	1.000	0.370
377	11	Apples-juice-concentrate	0.000816	3.000	1.000
378	O	Bananas-juice	0.002800	1.000	1.000
379	1A	Sugar-beet-molasses	0.000030	0.500	1.000
380	13A	Blackberries-juice	0.000205	1.000	1.000
383	5B	Cabbage-savoy	0.000370	1.000	1.000
384	4B	Celery juice	0.004170	1.000	1.000
389	O	Cranberries-juice-concentrate	0.043500	3.300	1.000
392	O	Grapes-juice-concentrate	0.000080	3.000	1.000
402	12	Peaches-juice	0.002100	1.000	1.000
404	11	Pears-juice	0.001068	1.000	1.000
405	6B	Peas-succulent/blackeye/cowpea			
		12-Cooked: NFS	0.001200	1.000	1.000
		14-Boiled	0.001200	1.000	1.000
		32-Canned: Cooked	0.000100	1.000	1.000
		42-Frozen: Cooked	0.000200	1.000	1.000
406	O	Pineapples-juice-concentrate	0.035000	0.440	1.000
410	12	Apricot juice	0.003710	1.000	1.000
415	9B	Squash-spaghetti	0.000270	1.000	1.000
416	O	Strawberries-juice	0.000390	1.000	1.000
420	10	Tangerines-juice-concentrate	0.001440	3.200	1.000
423	8	Tomatoes-dried	0.001030	14.300	1.000
431	14	Walnut oil	0.000350	1.000	1.000
436	9A	Watermelon-juice	0.000030	1.000	1.000
439	9B	Wintermelon	0.000340	1.000	1.000
441	10	Grapefruit-juice-concentrate	0.001440	3.900	1.000
442	10	Lemons-juice-concentrate	0.001440	5.700	1.000
443	10	Limes-juice-concentrate	0.001440	3.000	1.000
448	10	Grapefruit peel	0.014000	1.000	1.000
450	1AB	Ginseng	0.005910	1.000	1.000
451	5A	Broccoli-chinese	0.002900	1.000	1.000
452	5B	Bok choy	0.002900	1.000	1.000
480	O	Plantains-green	0.002800	1.000	1.000
481	O	Plantains-dried	0.002800	3.900	1.000
484	O	Radishes-oriental	0.001760	1.000	1.000
492	O	Radicchio	0.000310	1.000	1.000
497	9B	Balsam pear	0.000340	1.000	1.000

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for DIAZINON (1989-92 data)
Residue file name: C:\deem96\diazinon\diazinon-chronic-rev.R96
Adjustment factor #2 used.
Analysis Date 12-21-1999/06:44:41 Residue file dated: 12-20-1999/08:24:39/8
Reference dose (RfD, CHRONIC) = .0002 mg/kg bw/day
COMMENT 1: Chronic RfD from HIARC doc. of 9/21/99

Total exposure by population subgroup

Population Subgroup	Total Exposure mg/kg body wt/day	Percent of Rfd
U.S. Population (total)	0.000019	9.6%
U.S. Population (spring season)	0.000019	9.7%
U.S. Population (summer season)	0.000018	9.0%
U.S. Population (autumn season)	0.000020	10.2%
U.S. Population (winter season)	0.000019	9.7%
Northeast region	0.000022	10.8%
Midwest region	0.000019	9.4%
Southern region	0.000016	7.8%
Western region	0.000024	11.8%
Hispanics	0.000017	8.3%
Non-hispanic whites	0.000020	10.0%
Non-hispanic blacks	0.000014	7.1%
Non-hisp/non-white/non-black)	0.000033	16.5%
All infants (< 1 year)	0.000020	9.8%
Nursing infants	0.000015	7.4%
Non-nursing infants	0.000022	10.9%
Children 1-6 yrs	0.000027	13.4%
Children 7-12 yrs	0.000016	8.0%
Females 13-19(not preg or nursing)	0.000010	4.9%
Females 20+ (not preg or nursing)	0.000020	10.1%
Females 13-50 yrs	0.000017	8.7%
Females 13+ (preg/not nursing)	0.000014	7.0%
Females 13+ (nursing)	0.000024	12.1%
Males 13-19 yrs	0.000009	4.4%
Males 20+ yrs	0.000020	9.9%
Seniors 55+	0.000023	11.4%
Pacific Region	0.000024	12.1%

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for DIAZINON (1989-92 data)
Residue file name: C:\deem96\diazinon\diazinon-chronic-rev.R96
Adjustment factor #2 used.
Analysis Date 12-21-1999/09:43:48 Residue file dated: 12-20-1999/08:24:39/8
Reference dose (RfD, CHRONIC) = .0002 mg/kg bw/day
COMMENT 1: Chronic RfD from HIARC doc. of 9/21/99

Critical Commodity Contribution Analysis for
Non-hisp/non-white/non-black)

Total Exposure =.000033 mg/kg bw/day

Crop groups with total exposure contribution > 5%
Foods/Foodforms with exposure contribution > 1%

Crop group / Food / Foodform	Exposure Analysis: mg/kg body wt/day	% of Total Exposure	Percent of RfD
Crop Group = (O) Other			
Cranberries	0.0000005	1.37%	0.23%
Bananas	0.0000013	3.84%	0.63%
Pineapples-peeled fruit	0.0000013	4.08%	0.67%
Pineapples-juice	0.0000006	1.75%	0.29%
Coffee	0.0000043	13.05%	2.16%
Mushrooms	0.0000057	17.38%	2.87%
Total for crop group	0.0000145	43.91%	7.25%
Crop Group = (M) Meat			
Sheep-fat w/o bone	0.0000084	25.42%	4.20%
Sheep-lean (fat free) w/o bone	0.0000036	10.99%	1.81%
Total for crop group	0.0000120	36.41%	6.01%
Crop Group = (4) Leafy Vegetables (except Brassica)			
Celery	0.0000003	1.04%	0.17%
Total for crop group	0.0000007	2.01%	0.33%
Crop Group = (4B) Leaf Petioles			
Celery	0.0000003	1.04%	0.17%
Total for crop group	0.0000003	1.05%	0.17%
Crop Group = (10) Citrus Fruits			
Oranges-juice-concentrate	0.0000022	6.67%	1.10%
Oranges-juice	0.0000004	1.36%	0.22%
Total for crop group	0.0000028	8.62%	1.42%

Crop Group = (11) Pome Fruits			
Apples-juice/cider	0.0000004	1.29%	0.21%
Total for crop group	0.0000008	2.52%	0.42%
Total for crop groups listed above:	0.0000309	93.47%	15.4%

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for DIAZINON (1989-92 data)
Residue file name: C:\deem96\diazinon\diazinon-chronic-rev.R96
Adjustment factor #2 used.
Analysis Date 12-21-1999/09:43:48 Residue file dated: 12-20-1999/08:24:39/8
Reference dose (RfD, CHRONIC) = .0002 mg/kg bw/day
COMMENT 1: Chronic RfD from HIARC doc. of 9/21/99

Critical Commodity Contribution Analysis for
All infants (< 1 year)

Total Exposure =.0000197 mg/kg bw/day

Crop groups with total exposure contribution > 5%
Foods/Foodforms with exposure contribution > 1%

Crop group / Food / Foodform	Exposure Analysis: mg/kg body wt/day	% of Total Exposure	Percent of RfD
Crop Group = (O) Other			
Grapes	0.0000004	2.21%	0.22%
Bananas	0.0000036	18.09%	1.78%
Bananas-dried	0.0000006	2.82%	0.28%
Pineapples-peeled fruit	0.0000025	12.74%	1.25%
Pineapples-juice	0.0000005	2.42%	0.24%
Mushrooms	0.0000002	1.23%	0.12%
Cranberries-juice-concentrate	0.0000010	5.12%	0.50%
Pineapples-juice-concentrate	0.0000003	1.59%	0.16%
Total for crop group	0.0000093	47.43%	4.67%
Crop Group = (M) Meat			
Sheep-fat w/o bone	0.0000005	2.43%	0.24%
Sheep-lean (fat free) w/o bone	0.0000003	1.44%	0.14%
Total for crop group	0.0000008	3.86%	0.38%
Crop Group = (1) Root and Tuber Vegetables			
Carrots	0.0000006	3.22%	0.32%
Total for crop group	0.0000008	4.07%	0.40%
Crop Group = (1A) Root Vegetables			
Carrots	0.0000006	3.22%	0.32%
Total for crop group	0.0000007	3.47%	0.34%
Crop Group = (1B) Root Vegetables (exc sugar beet) subgroup			
Carrots	0.0000006	3.22%	0.32%
Total for crop group	0.0000007	3.35%	0.33%

Crop group Food Foodform	----------Exposure Analysis------- mg/kg body wt/day	% of Total Exposure	Percent of RfD
Crop Group = (9) Curcurbit Vegetables			
Squash-winter	0.0000004	1.99%	0.20%
Total for crop group	0.0000004	2.00%	0.20%
Crop Group = (9B) Squash/Cucumbers			
Squash-winter	0.0000004	1.99%	0.20%
Total for crop group	0.0000004	1.99%	0.20%
Crop Group = (10) Citrus Fruits			
Oranges-juice-concentrate	0.0000017	8.78%	0.86%
Total for crop group	0.0000018	8.98%	0.88%
Crop Group = (11) Pome Fruits			
Apples	0.0000008	3.90%	0.38%
Apples-juice/cider	0.0000005	2.68%	0.26%
Pears	0.0000006	2.92%	0.29%
Apples-juice-concentrate	0.0000018	9.20%	0.91%
Pears-juice	0.0000015	7.61%	0.75%
Total for crop group	0.0000052	26.32%	2.59%
Crop Group = (12) Stone Fruits			
Peaches			
Cooked: NFS	0.0000002	1.17%	0.11%
Canned: NFS	0.0000003	1.43%	0.14%
Total for crop group	0.0000010	4.98%	0.49%
Total for crop groups listed above:	0.0000192	97.63%	9.6%

U.S. Environmental Protection Agency Ver. 6.76
DEEM Chronic analysis for DIAZINON (1989-92 data)
Residue file name: C:\deem96\diazinon\diazinon-chronic-rev.R96
Adjustment factor #2 used.
Analysis Date 12-21-1999/09:43:48 Residue file dated: 12-20-1999/08:24:39/8
Reference dose (RfD, CHRONIC) = .0002 mg/kg bw/day
COMMENT 1: Chronic RfD from HIARC doc. of 9/21/99

Critical Commodity Contribution Analysis for
Children 1-6 yrs

Total Exposure =.0000268 mg/kg bw/day

Crop groups with total exposure contribution > 5%
Foods/Foodforms with exposure contribution > 1%

Crop group / Food / Foodform	mg/kg body wt/day	% of Total Exposure	Percent of RfD
Crop Group = (O) Other			
Cranberries	0.0000009	3.50%	0.47%
Cranberries-juice	0.0000011	4.18%	0.56%
Grapes	0.0000004	1.51%	0.20%
Bananas	0.0000022	8.22%	1.10%
Pineapples-peeled fruit	0.0000015	5.41%	0.73%
Pineapples-juice	0.0000006	2.41%	0.32%
Mushrooms	0.0000051	18.98%	2.55%
Pineapples-juice-concentrate	0.0000004	1.39%	0.19%
Total for crop group	0.0000132	49.26%	6.61%
Crop Group = (M) Meat			
Sheep-fat w/o bone	0.0000011	4.03%	0.54%
Sheep-lean (fat free) w/o bone	0.0000003	1.22%	0.16%
Total for crop group	0.0000014	5.24%	0.70%
Crop Group = (4) Leafy Vegetables (except Brassica)			
Celery	0.0000004	1.37%	0.18%
Total for crop group	0.0000007	2.52%	0.34%
Crop Group = (4B) Leaf Petioles			
Celery	0.0000004	1.37%	0.18%
Total for crop group	0.0000004	1.37%	0.18%

Crop group Food Foodform	----------Exposure Analysis------- mg/kg body wt/day	% of Total Exposure	Percent of RfD
Crop Group = (6) Legume Vegetables (Succulent or Dried)			
Beans-succulent-green			
Boiled	0.0000004	1.59%	0.21%
Peas (garden)-green			
Boiled	0.0000005	1.78%	0.24%
Total for crop group	0.0000010	3.74%	0.50%
Crop Group = (6A) Edible-pod Legume Vegetables			
Beans-succulent-green			
Boiled	0.0000004	1.59%	0.21%
Peas (garden)-green			
Boiled	0.0000005	1.78%	0.24%
Total for crop group	0.0000010	3.59%	0.48%
Crop Group = (6B) Succulent shelled peas and beans			
Peas (garden)-green			
Boiled	0.0000005	1.78%	0.24%
Total for crop group	0.0000006	2.12%	0.28%
Crop Group = (10) Citrus Fruits			
Oranges-juice-concentrate	0.0000035	12.96%	1.74%
Oranges-juice	0.0000011	4.12%	0.55%
Total for crop group	0.0000049	18.15%	2.43%
Crop Group = (11) Pome Fruits			
Apples	0.0000007	2.56%	0.34%
Apples-juice/cider	0.0000022	8.29%	1.11%
Total for crop group	0.0000033	12.29%	1.65%
Crop Group = (12) Stone Fruits			
Peaches			
Cooked: NFS	0.0000004	1.58%	0.21%
Total for crop group	0.0000010	3.59%	0.48%
Total for crop groups listed above:	0.0000254	94.78%	12.7%

U.S. Environmental Protection Agency Ver. 6.78
DEEM Acute analysis for DIAZINON 1989-92 data
Residue file name: C:\deem\diazinon-folder\diazinon-acute.R96
Analysis Date 12-20-1999 Residue file dated: 12-08-1999/14:56:21/8
Reference dose: aRfD = 0.0025 mg/kg bw/day NOEL = 0.25 mg/kg bw/day
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RDF indices and file names for Monte Carlo Analysis

1 apple-juice.rdf
2 apples-B.rdf
3 apples-NB.rdf
4 apples-PB.rdf
5 apricot-B.rdf
6 apricot-NB.rdf
7 apricot-PB.rdf
8 beet-garden-tops.rdf
9 beets-garden-roots.rdf
10 blackberries-or-blackberry-juice.rdf
11 blueberries.rdf
12 bok-choy.rdf
13 broccoli.rdf
14 cabbage-NB.rdf
15 cabbage-PB.rdf
16 cabbage-savoy.rdf
17 cantaloupe-NB-PB.rdf
18 carrots.rdf
19 carrots-PB.rdf
20 cauliflower-NB-PB.rdf
21 celery.rdf
22 celery-PB.rdf
23 cherries.rdf
24 citrus.rdf
25 collard.rdf
26 cranberries.rdf
27 cucumber-NB.rdf
28 cucumber-PB.rdf
29 dandelion-greens.rdf
30 dewbry-loganbry-youngbry.rdf
31 endive-escarole-pb.rdf
32 figs.rdf
33 garlic-NB-PB.rdf
34 ginseng.rdf
35 grapefruit-juice-PB.rdf
36 grapefruit-NB-PB.rdf
37 grapes.rdf
38 grapes-juice.rdf
39 green-beans-canned.rdf
40 green-beans-fresh.rdf
41 green-beans-frozen.rdf
42 green-onions.rdf
43 green-peas-canned.rdf
44 green-peas-fresh.rdf
45 green-peas-frozen.rdf
46 honeydew-NB-PB.rdf
47 kale.rdf

48 Lettuce-head.rdf
49 Lettuce-leaf.rdf
50 mustard-green.rdf
51 nectarines-NB.rdf
52 onions-dry-B.rdf
53 onions-dry-NB-PB.rdf
54 orange-juice.rdf
55 orange-NB-PB.rdf
56 parsley.rdf
57 parsnips.rdf
58 peach-B.rdf
59 peaches-NB.rdf
60 peaches-PB.rdf
61 pear-B.rdf
62 pear-fresh.rdf
63 pear-NB.rdf
64 pear-PB.rdf
65 pineapple-NB-PB.rdf
66 plums.rdf
67 potato-NB-PB.rdf
68 radicchio-NB.rdf
69 radishes-roots.rdf
70 radish-oriental.rdf
71 raspbry.rdf
72 rutabagas-NB.rdf
73 sorghum.rdf
74 spinach-canned.rdf
75 spinach-fresh.rdf
76 squash-summer-NB.rdf
77 squash-summer-PB.rdf
78 strawberries-PB.rdf
79 sweet-corn-canned.rdf
80 sweet-corn-frozen.rdf
81 sweet-corn-NB-PB.rdf
82 sweet-potato-NB-PB.rdf
83 swiss-chard-NB.rdf
84 tomato-B.rdf
85 tomato-NB.rdf
86 tomato-PB.rdf
87 turnip-roots.rdf
88 turnips-tops.rdf
89 watermelon-NB-PB.rdf
90 winter-squash-NB.rdf
91 lettuce-unspecified.rdf
92 hot-pepper-NB.rdf
93 hot-pepper-PB.rdf
94 green-pepper-NB.rdf
95 green-pepper-PB.rdf
96 grapefruit-peel.rdf
97 orange-peel.rdf
98 lemon-peel.rdf
99 lemon-lime-tangerine-juice.rdf
100almonds.rdf
101filberts.rdf

102walnuts.rdf
103mushrooms.rdf
104sheep-fat.rdf
105sheep-kidney.rdf
106sheep-lean.rdf
107sheep-liver.rdf
108sheep-by-prod.rdf
109sheep-others.rdf
110tomato-PB-puree.rdf

Summary of Residue Distribution Files (RDF) listed in diazinon-acute.R96

RDF #	File Name	N residues w freq's	N residues w/o freq's	N LODs Value	LOD	N Zeros
1	apple-juice.rdf	0	1	32	0.002549	67
2	apples-B.rdf	0	32	2522	0.002614	0
3	apples-NB.rdf	0	992	6925	0.002614	71257
4	apples-PB.rdf	0	32	223	0.002614	2299
5	apricot-B.rdf	0	65	1022	0.003269	0
6	apricot-NB.rdf	0	998	6846	0.003269	2085
7	apricot-PB.rdf	0	1	67	0.003471	32
8	beet-garden-tops.rdf	0	40	680	0.003645	638
9	beets-garden-roots.rdf	0	1	52	0.0015	47
10	blackberries-or-blackberry-juice.rdf	0	3	41	0.00015	148
11	blueberries.rdf	0	1	10	0.0015	89
12	bok-choy.rdf	0	2	96	0.0015	0
13	broccoli.rdf	0	1	20	0.0028	79
14	cabbage-NB.rdf	0	1	89	0.0015	442
15	cabbage-PB.rdf	0	1	164	0.0015	367
16	cabbage-savoy.rdf	0	1	89	0.0015	442
17	cantaloupe-NB-PB.rdf	0	3	72	0.0015	339
18	carrots.rdf	0	998	4541	0.00324	22156
19	carrots-PB.rdf	0	68	309	0.00324	1510
20	cauliflower-NB-PB.rdf	0	1	30	0.0015	69
21	celery.rdf	0	997	759	0.0028	9948
22	celery-PB.rdf	0	69	52	0.0028	688
23	cherries.rdf	0	29	100	0.0015	316
24	citrus.rdf	0	1	0	0	99
25	collard.rdf	0	7	92	0.0015	256
26	cranberries.rdf	0	8	0	0	3
27	cucumber-NB.rdf	0	1	31	0.0015	419
28	cucumber-PB.rdf	0	1	53	0.0015	397
29	dandelion-greens.rdf	0	40	680	0.003645	0
30	dewbry-loganbry-youngbry.rdf	0	3	83	0.00015	106
31	endive-escarole-pb.rdf	0	4	140	0.0015	0

32 figs.rdf 0 6 0 0 17
33 garlic-NB-PB.rdf 0 2 38 0.0015 324
34 ginseng.rdf 0 68 309 0.00324 0
35 grapefruit-juice-PB.rdf
0 1 39 0.003684 60
36 grapefruit-NB-PB.rdf
0 1 3 0.003091 96
37 grapes.rdf 0 29 951 0.002592 904
38 grapes-juice.rdf 0 1 6 0.002647 93
39 green-beans-canned.rdf
0 1 26 0.0027 828
40 green-beans-fresh.rdf
0 5 30 0.0033 1143
41 green-beans-frozen.rdf
0 11 11 0.0026 721
42 green-onions.rdf 0 1 22 0.0015 77
43 green-peas-canned.rdf
0 1 36 0.0026 709
44 green-peas-fresh.rdf
0 13 30 0.0015 497
45 green-peas-frozen.rdf
0 10 25 0.0025 668
46 honeydew-NB-PB.rdf
0 3 38 0.0015 373
47 kale.rdf 0 7 0 0 693
48 Lettuce-head.rdf 0 998 8963 0.002478 15580
49 Lettuce-leaf.rdf 0 27 443 0.002478 221
50 mustard-green.rdf 0 7 131 0.0015 216
51 nectarines-NB.rdf 0 997 6847 0.003269 0
52 onions-dry-B.rdf 0 2 246 0.0015 0
53 onions-dry-NB-PB.rdf
0 2 38 0.0015 208
54 orange-juice.rdf 0 1 39 0.003684 60
55 orange-NB-PB.rdf 0 1 2 0.003091 97
56 parsley.rdf 0 40 680 0.003645 8280
57 parsnips.rdf 0 996 4543 0.00324 0
58 peach-B.rdf 0 65 1022 0.003269 0
59 peaches-NB.rdf 0 998 6846 0.003269 8846
60 peaches-PB.rdf 0 1 19 0.003471 80
61 pear-B.rdf 0 37 1383 0.003 0
62 pear-fresh.rdf 0 1000 8735 0.002486 19765
63 pear-NB.rdf 0 6 149 0.0035 490
64 pear-PB.rdf 0 37 403 0.003 980
65 pineapple-NB-PB.rdf
0 15 0 0 0
66 plums.rdf 0 1 53 0.0015 46
67 potato-NB-PB.rdf 0 1 13 0.0023 1387
68 radicchio-NB.rdf 0 40 8963 0.002478 0
69 radishes-roots.rdf
0 1 6 0.0015 113
70 radish-oriental.rdf
0 1 141 0.0015 0
71 raspbry.rdf 0 2 60 0.0015 77
72 rutabagas-NB.rdf 0 998 4541 0.00324 0

73 sorghum.rdf 0 24 1539 0.0032 0
74 spinach-canned.rdf
0 1 59 0.003978 40
75 spinach-fresh.rdf 0 40 680 0.003645 918
76 squash-summer-NB.rdf
0 1 45 0.0015 468
77 squash-summer-PB.rdf
0 1 45 0.0015 468
78 strawberries-PB.rdf
0 9 89 0.0034 512
79 sweet-corn-canned.rdf
0 1 84 0.0021 569
80 sweet-corn-frozen.rdf
0 1 82 0.0021 552
81 sweet-corn-NB-PB.rdf
0 3 67 0.0015 470
82 sweet-potato-NB-PB.rdf
0 3 200 0.0023 1355
83 swiss-chard-NB.rdf
0 997 759 0.0028 0
84 tomato-B.rdf 0 10 1587 0.0026 0
85 tomato-NB.rdf 0 10 597 0.0026 990
86 tomato-PB.rdf 0 10 597 0.0026 990
87 turnip-roots.rdf 0 996 4543 0.00324 0
88 turnips-tops.rdf 0 40 680 0.003645 0
89 watermelon-NB-PB.rdf
0 1 20 0.0015 394
90 winter-squash-NB.rdf
0 2 405 0.0025 562
91 lettuce-unspecified.rdf
0 27 332 0.002478 332
92 hot-pepper-NB.rdf 0 8 0 0 792
93 hot-pepper-PB.rdf 0 8 0 0 792
94 green-pepper-NB.rdf
0 8 67 0.0015 322
95 green-pepper-PB.rdf
0 8 67 0.0015 322
96 grapefruit-peel.rdf
0 1 3 0.7 96
97 orange-peel.rdf 0 1 2 0.7 97
98 lemon-peel.rdf 0 1 0 0 99
99 lemon-lime-tangerine-juice.rdf
0 1 38 0.00368 61
100 almonds.rdf 0 3 0 0 7
101 filberts.rdf 0 4 0 0 29
102 walnuts.rdf 0 1 13 0.005 86
103 mushrooms.rdf 0 13 0 0 0
104 sheep-fat.rdf 1 0 0 0 63
105 sheep-kidney.rdf 1 0 0 0 63
106 sheep-lean.rdf 1 0 0 0 63
107 sheep-liver.rdf 1 0 0 0 63
108 sheep-by-prod.rdf 1 0 0 0 63
109 sheep-others.rdf 1 0 0 0 63
110 tomato-PB-puree.rdf

0	10	325	0.0026	1262

DEEM INPUTS

Food Crop Grp		Food Name	RESIDUE (ppm)	RDF #	Adj.Factors #1	#2	Code
1	13A	Blackberries	0.500000	10	1.000	1.000	
2	13A	Boysenberries	0.500000	30	1.000	1.000	
3	13A	Dewberries	0.500000	30	1.000	1.000	
4	13A	Loganberries	0.750000	30	1.000	1.000	
5	13A	Raspberries	0.500000	71	1.000	1.000	
6	13A	Youngberries	0.500000	30	1.000	1.000	
7	13B	Blueberries	0.500000	11	1.000	1.000	
8	O	Cranberries	0.500000	26	1.000	1.000	
9	O	Cranberries-juice	0.500000	26	1.100	1.000	
13	O	Grapes	0.750000	37	1.000	1.000	
14	O	Grapes-raisins	0.750000	37	0.130	1.000	
15	O	Grapes-juice	0.750000	38	1.000	1.000	
17	O	Strawberries	0.500000	78	1.000	1.000	
20	10	Citrus citron	0.700000	24	1.000	1.000	
22	10	Grapefruit-peeled fruit					
		11-Uncooked	0.700000	36	1.000	1.000	
		12-Cooked: NFS	0.700000	36	1.000	1.000	
		31-Canned: NFS	0.700000	36	1.000	1.000	
23	10	Grapefruit-juice	0.700000	35	1.000	1.000	
24	10	Kumquats	0.700000	24	1.000	1.000	
26	10	Lemons-peeled fruit					
		11-Uncooked	0.700000	24	1.000	1.000	
		12-Cooked: NFS	0.700000	24	1.000	1.000	
		31-Canned: NFS	0.700000	24	1.000	1.000	
27	10	Lemons-peel	0.700000	98	1.000	1.000	
28	10	Lemons-juice	0.700000	99	1.000	1.000	
30	10	Limes-peeled fruit					
		11-Uncooked	0.700000	24	1.000	1.000	
31	10	Limes-peel	0.700000	98	1.000	1.000	
32	10	Limes-juice	0.700000	99	1.000	1.000	
33	10	Oranges-juice-concentrate	0.700000	54	3.700	1.000	
34	10	Oranges-peeled fruit					
		11-Uncooked	0.700000	55	1.000	1.000	
		12-Cooked: NFS	0.700000	55	1.000	1.000	
		31-Canned: NFS	0.700000	55	1.000	1.000	
35	10	Oranges-peel	0.700000	97	1.000	1.000	
36	10	Oranges-juice	0.700000	54	1.000	1.000	
37	10	Tangelos	0.700000	24	1.000	1.000	
38	10	Tangerines					
		11-Uncooked	0.700000	24	1.000	1.000	
		31-Canned: NFS	0.700000	24	1.000	1.000	
		41-Frozen: NFS	0.700000	24	1.000	1.000	
39	10	Tangerines-juice	0.700000	99	1.000	1.000	
40	14	Almonds	0.500000	100	1.000	1.000	
44	14	Filberts (hazelnuts)	0.500000	101	1.000	1.000	
48	14	Walnuts	0.500000	102	1.000	1.000	
52	11	Apples					
		11-Uncooked	0.500000	3	1.000	1.000	
		12-Cooked: NFS	0.500000	3	1.000	1.000	

	13-Baked	0.500000	3	1.000	1.000	
	14-Boiled	0.500000	3	1.000	1.000	
	15-Fried	0.500000	3	1.000	1.000	
	18-Dried	0.500000	3	1.000	1.000	
	31-Canned: NFS	0.500000	4	1.000	1.000	
	32-Canned: Cooked	0.500000	4	1.000	1.000	
	33-Canned: Baked	0.500000	4	1.000	1.000	
	34-Canned: Boiled	0.500000	4	1.000	1.000	
	42-Frozen: Cooked	0.500000	4	1.000	1.000	
53 11	Apples-dried	0.500000	2	8.000	1.000	
54 11	Apples-juice/cider	0.500000	1	1.000	1.000	
56 11	Pears					
	11-Uncooked	0.500000	63	1.000	1.000	
	12-Cooked: NFS	0.500000	63	1.000	1.000	
	13-Baked	0.500000	63	1.000	1.000	
	14-Boiled	0.500000	63	1.000	1.000	
	31-Canned: NFS	0.500000	64	1.000	1.000	
57 11	Pears-dried	0.500000	61	6.250	1.000	
59 12	Apricots					
	11-Uncooked	0.500000	6	1.000	1.000	
	12-Cooked: NFS	0.500000	6	1.000	1.000	
	14-Boiled	0.500000	6	1.000	1.000	
	31-Canned: NFS	0.500000	7	1.000	1.000	
	34-Canned: Boiled	0.500000	7	1.000	1.000	
60 12	Apricots-dried	0.500000	5	6.000	1.000	
61 12	Cherries	0.750000	23	1.000	1.000	
62 12	Cherries-dried	0.750000	23	4.000	1.000	
63 12	Cherries-juice	0.750000	23	1.500	1.000	
64 12	Nectarines	0.500000	51	1.000	1.000	
65 12	Peaches					
	11-Uncooked	0.700000	59	1.000	1.000	
	12-Cooked: NFS	0.700000	59	1.000	1.000	
	13-Baked	0.700000	59	1.000	1.000	
	14-Boiled	0.700000	59	1.000	1.000	
	31-Canned: NFS	0.700000	60	1.000	1.000	
	41-Frozen: NFS	0.700000	60	1.000	1.000	
66 12	Peaches-dried	0.700000	58	7.000	1.000	
67 12	Plums (damsons)					
	11-Uncooked	0.500000	66	1.000	1.000	
	12-Cooked: NFS	0.500000	66	1.000	1.000	
	31-Canned: NFS	0.500000	66	1.000	1.000	
	42-Frozen: Cooked	0.500000	66	1.000	1.000	
	51-Cured: NFS (smoked/p	0.500000	66	1.000	1.000	
68 12	Plums-prunes (dried)	0.500000	66	0.600	1.000	
69 12	Plums/prune-juice	0.500000	66	1.400	1.000	
72 O	Bananas					
	11-Uncooked	0.002800	0	1.000	1.000	
	12-Cooked: NFS	0.002800	0	1.000	1.000	
	13-Baked	0.002800	0	1.000	1.000	
	14-Boiled	0.002800	0	1.000	1.000	
	15-Fried	0.002800	0	1.000	1.000	
	31-Canned: NFS	0.002800	0	1.000	1.000	
	32-Canned: Cooked	0.002800	0	1.000	1.000	
73 O	Bananas-dried	0.002800	0	3.900	1.000	

78	O	Figs	0.500000	32	1.000	1.000
89	O	Pineapples-peeled fruit				
		11-Uncooked	0.500000	65	1.000	1.000
		12-Cooked: NFS	0.500000	65	1.000	1.000
		13-Baked	0.500000	65	1.000	1.000
		14-Boiled	0.500000	65	1.000	1.000
		31-Canned: NFS	0.500000	65	1.000	1.000
		33-Canned: Baked	0.500000	65	1.000	1.000
		41-Frozen: NFS	0.500000	65	1.000	1.000
90	O	Pineapples-dried	0.035000	0	5.000	1.000
91	O	Pineapples-juice	0.500000	65	0.120	1.000
94	O	Plantains-ripe	0.002800	0	1.000	1.000
97	O	Kiwi fruit				
		11-Uncooked	0.001500	0	1.000	1.000
		31-Canned: NFS	0.001500	0	1.000	1.000
112	O	Coffee	0.200000	0	1.000	1.000
125	O	Hops	0.115000	0	1.000	1.000
141	9A	Melons-cantaloupes-juice	0.750000	17	1.000	1.000
142	9A	Melons-cantaloupes-pulp	0.750000	17	1.000	1.000
143	9A	Casabas	0.750000	17	1.000	1.000
144	9A	Crenshaws	0.750000	17	1.000	1.000
145	9A	Melons-honeydew	0.750000	17	1.000	1.000
146	9A	Melons-persian	0.750000	17	1.000	1.000
147	9A	Watermelon	0.750000	89	1.000	1.000
148	9B	Cucumbers				
		11-Uncooked	0.750000	27	1.000	1.000
		34-Canned: Boiled	0.750000	28	1.000	1.000
		60-Canned: Cured	0.750000	28	1.000	1.000
150	9B	Squash-summer				
		11-Uncooked	0.500000	76	1.000	1.000
		12-Cooked: NFS	0.500000	76	1.000	1.000
		13-Baked	0.500000	76	1.000	1.000
		14-Boiled	0.500000	76	1.000	1.000
		15-Fried	0.500000	76	1.000	1.000
		34-Canned: Boiled	0.500000	77	1.000	1.000
		42-Frozen: Cooked	0.500000	77	1.000	1.000
		51-Cured: NFS (smoked/p	0.500000	77	1.000	1.000
151	9B	Squash-winter				
		11-Uncooked	0.750000	90	1.000	1.000
		12-Cooked: NFS	0.750000	90	1.000	1.000
		13-Baked	0.750000	90	1.000	1.000
		14-Boiled	0.750000	90	1.000	1.000
152	9B	Bitter melon	0.500000	17	1.000	1.000
155	8	Peppers-sweet(garden)				
		11-Uncooked	0.500000	94	1.000	1.000
		12-Cooked: NFS	0.500000	94	1.000	1.000
		13-Baked	0.500000	94	1.000	1.000
		14-Boiled	0.500000	94	1.000	1.000
		31-Canned: NFS	0.500000	95	1.000	1.000
		32-Canned: Cooked	0.500000	95	1.000	1.000
		34-Canned: Boiled	0.500000	95	1.000	1.000
		42-Frozen: Cooked	0.500000	95	1.000	1.000
		51-Cured: NFS (smoked/p	0.500000	95	1.000	1.000
156	8	Peppers-chilli incl jalapeno				

11-Uncooked 0.500000 92 1.000 1.000
12-Cooked: NFS 0.500000 92 1.000 1.000
13-Baked 0.500000 92 1.000 1.000
14-Boiled 0.500000 92 1.000 1.000
15-Fried 0.500000 92 1.000 1.000
31-Canned: NFS 0.500000 93 1.000 1.000
32-Canned: Cooked 0.500000 93 1.000 1.000
33-Canned: Baked 0.500000 93 1.000 1.000
34-Canned: Boiled 0.500000 93 1.000 1.000
42-Frozen: Cooked 0.500000 93 1.000 1.000
51-Cured: NFS (smoked/p 0.500000 93 1.000 1.000
52-Cured: Cooked(smokd/ 0.500000 93 1.000 1.000
60-Canned: Cured 0.500000 93 1.000 1.000
157 8 Peppers-other
11-Uncooked 0.500000 92 1.000 1.000
158 8 Pimientos
12-Cooked: NFS 0.500000 94 1.000 1.000
14-Boiled 0.500000 94 1.000 1.000
31-Canned: NFS 0.500000 95 1.000 1.000
60-Canned: Cured 0.500000 95 1.000 1.000
159 8 Tomatoes-whole
11-Uncooked 0.750000 85 1.000 1.000
12-Cooked: NFS 0.750000 85 1.000 1.000
13-Baked 0.750000 85 1.000 1.000
14-Boiled 0.750000 85 1.000 1.000
15-Fried 0.750000 85 1.000 1.000
31-Canned: NFS 0.750000 86 1.000 1.000
32-Canned: Cooked 0.750000 86 1.000 1.000
33-Canned: Baked 0.750000 86 1.000 1.000
34-Canned: Boiled 0.750000 86 1.000 1.000
42-Frozen: Cooked 0.750000 86 1.000 1.000
160 8 Tomatoes-juice 0.000637 86 0.050 1.000
161 8 Tomatoes-puree 0.000637 110 0.700 1.000
162 8 Tomatoes-paste 0.000637 110 0.600 1.000
163 8 Tomatoes-catsup 0.000637 0 0.300 1.000
165 2 Beets-garden-tops(greens) 0.700000 8 1.000 1.000
166 4B Celery
11-Uncooked 0.700000 21 1.000 1.000
12-Cooked: NFS 0.700000 21 1.000 1.000
13-Baked 0.700000 21 1.000 1.000
14-Boiled 0.700000 21 1.000 1.000
15-Fried 0.700000 21 1.000 1.000
31-Canned: NFS 0.700000 22 1.000 1.000
32-Canned: Cooked 0.700000 22 1.000 1.000
34-Canned: Boiled 0.700000 22 1.000 1.000
42-Frozen: Cooked 0.700000 22 1.000 1.000
168 5A Broccoli
11-Uncooked 0.700000 13 1.000 1.000
12-Cooked: NFS 0.700000 13 1.000 1.000
13-Baked 0.700000 13 1.000 1.000
14-Boiled 0.700000 13 1.000 1.000
15-Fried 0.700000 13 1.000 1.000
32-Canned: Cooked 0.700000 13 1.000 1.000
42-Frozen: Cooked 0.700000 13 1.000 1.000

44-Frozen: Boiled 0.700000 13 1.000 1.000
169 5A Brussels sprouts 0.002800 0 1.000 1.000
170 5A Cabbage-green and red
11-Uncooked 0.700000 14 1.000 1.000
12-Cooked: NFS 0.700000 14 1.000 1.000
13-Baked 0.700000 14 1.000 1.000
14-Boiled 0.700000 14 1.000 1.000
15-Fried 0.700000 14 1.000 1.000
31-Canned: NFS 0.700000 15 1.000 1.000
32-Canned: Cooked 0.700000 15 1.000 1.000
51-Cured: NFS (smoked/p 0.700000 15 1.000 1.000
171 5A Cauliflower
11-Uncooked 0.700000 20 1.000 1.000
12-Cooked: NFS 0.700000 20 1.000 1.000
14-Boiled 0.700000 20 1.000 1.000
15-Fried 0.700000 20 1.000 1.000
42-Frozen: Cooked 0.700000 20 1.000 1.000
172 5B Collards 0.700000 25 1.000 1.000
174 5B Kale 0.700000 47 1.000 1.000
175 5A Kohlrabi 0.001500 0 1.000 1.000
176 4A Lettuce-leafy varieties 0.700000 49 1.000 1.000
177 4A Dandelion-greens
11-Uncooked 0.700000 29 1.000 1.000
178 4A Endive-curley and escarole
11-Uncooked 0.700000 31 1.000 1.000
12-Cooked: NFS 0.700000 31 1.000 1.000
182 4A Lettuce-unspecified 0.700000 91 1.000 1.000
183 5B Mustard greens 0.700000 50 1.000 1.000
184 4A Parsley
11-Uncooked 0.750000 56 1.000 1.000
12-Cooked: NFS 0.750000 56 1.000 1.000
13-Baked 0.750000 56 1.000 1.000
14-Boiled 0.750000 56 1.000 1.000
15-Fried 0.750000 56 1.000 1.000
31-Canned: NFS 0.750000 56 1.000 1.000
32-Canned: Cooked 0.750000 56 1.000 1.000
34-Canned: Boiled 0.750000 56 1.000 1.000
186 4A Spinach
11-Uncooked 0.700000 75 1.000 1.000
12-Cooked: NFS 0.700000 75 1.000 1.000
14-Boiled 0.700000 75 1.000 1.000
31-Canned: NFS 0.700000 74 1.000 1.000
32-Canned: Cooked 0.700000 74 1.000 1.000
34-Canned: Boiled 0.700000 74 1.000 1.000
42-Frozen: Cooked 0.700000 74 1.000 1.000
44-Frozen: Boiled 0.700000 74 1.000 1.000
187 4B Swiss chard
11-Uncooked 0.700000 83 1.000 1.000
14-Boiled 0.700000 83 1.000 1.000
188 2 Turnips-tops 0.750000 88 1.000 1.000
189 O Watercress 0.025000 0 1.000 1.000
192 4A Lettuce-head varieties 0.700000 48 1.000 1.000
197 1AB Beets-garden-roots
11-Uncooked 0.750000 9 1.000 1.000

14-Boiled 0.750000 9 1.000 1.000
31-Canned: NFS 0.750000 9 1.000 1.000
32-Canned: Cooked 0.750000 9 1.000 1.000
51-Cured: NFS (smoked/p 0.750000 9 1.000 1.000
198 1AB Carrots
11-Uncooked 0.750000 18 1.000 1.000
12-Cooked: NFS 0.750000 18 1.000 1.000
13-Baked 0.750000 18 1.000 1.000
14-Boiled 0.750000 18 1.000 1.000
31-Canned: NFS 0.750000 19 1.000 1.000
32-Canned: Cooked 0.750000 19 1.000 1.000
34-Canned: Boiled 0.750000 19 1.000 1.000
42-Frozen: Cooked 0.750000 19 1.000 1.000
44-Frozen: Boiled 0.750000 19 1.000 1.000
202 3 Garlic
11-Uncooked 0.750000 33 1.000 1.000
12-Cooked: NFS 0.750000 33 1.000 1.000
13-Baked 0.750000 33 1.000 1.000
14-Boiled 0.750000 33 1.000 1.000
15-Fried 0.750000 33 1.000 1.000
31-Canned: NFS 0.750000 33 1.000 1.000
32-Canned: Cooked 0.750000 33 1.000 1.000
33-Canned: Baked 0.750000 33 1.000 1.000
34-Canned: Boiled 0.750000 33 1.000 1.000
42-Frozen: Cooked 0.750000 33 1.000 1.000
51-Cured: NFS (smoked/p 0.750000 33 1.000 1.000
52-Cured: Cooked(smokd/ 0.750000 33 1.000 1.000
204 3 Leeks
11-Uncooked 0.750000 42 1.000 1.000
12-Cooked: NFS 0.750000 42 1.000 1.000
205 3 Onions-dry-bulb (cipollini)
11-Uncooked 0.750000 53 1.000 1.000
12-Cooked: NFS 0.750000 53 1.000 1.000
13-Baked 0.750000 53 1.000 1.000
14-Boiled 0.750000 53 1.000 1.000
15-Fried 0.750000 53 1.000 1.000
31-Canned: NFS 0.750000 53 1.000 1.000
32-Canned: Cooked 0.750000 53 1.000 1.000
34-Canned: Boiled 0.750000 53 1.000 1.000
42-Frozen: Cooked 0.750000 53 1.000 1.000
43-Frozen: Baked 0.750000 53 1.000 1.000
44-Frozen: Boiled 0.750000 53 1.000 1.000
60-Canned: Cured 0.750000 53 1.000 1.000
206 3 Onions-dehydrated or dried
12-Cooked: NFS 0.750000 52 9.000 1.000
13-Baked 0.750000 52 9.000 1.000
14-Boiled 0.750000 52 9.000 1.000
15-Fried 0.750000 52 9.000 1.000
31-Canned: NFS 0.750000 52 9.000 1.000
32-Canned: Cooked 0.750000 52 9.000 1.000
34-Canned: Boiled 0.750000 52 9.000 1.000
42-Frozen: Cooked 0.750000 52 9.000 1.000
207 1C Potatoes/white-whole 0.100000 67 1.000 1.000
208 1C Potatoes/white-unspecified 0.100000 67 1.000 1.000

209 1C Potatoes/white-peeled
12-Cooked: NFS 0.100000 67 1.000 1.000
13-Baked 0.100000 67 1.000 1.000
14-Boiled 0.100000 67 1.000 1.000
15-Fried 0.100000 67 1.000 1.000
32-Canned: Cooked 0.100000 67 1.000 1.000
34-Canned: Boiled 0.100000 67 1.000 1.000
42-Frozen: Cooked 0.100000 67 1.000 1.000
43-Frozen: Baked 0.100000 67 1.000 1.000
45-Frozen: Fried 0.100000 67 1.000 1.000
210 1C Potatoes/white-dry 0.000023 0 6.500 1.000
211 1C Potatoes/white-peel only 0.100000 67 1.000 1.000
212 1AB Radishes-roots 0.500000 69 1.000 1.000
214 1AB Rutabagas-roots 0.750000 72 1.000 1.000
217 3 Shallots 0.750000 53 1.000 1.000
218 1CD Sweet potatoes (incl yams)
12-Cooked: NFS 0.100000 82 1.000 1.000
13-Baked 0.100000 82 1.000 1.000
14-Boiled 0.100000 82 1.000 1.000
15-Fried 0.100000 82 1.000 1.000
32-Canned: Cooked 0.100000 82 1.000 1.000
34-Canned: Boiled 0.100000 82 1.000 1.000
219 1AB Turnips-roots 0.500000 87 1.000 1.000
220 1AB Parsnips 0.500000 57 1.000 1.000
233 6B Beans-succulent-lima
11-Uncooked 0.500000 40 1.000 1.000
12-Cooked: NFS 0.500000 40 1.000 1.000
14-Boiled 0.500000 40 1.000 1.000
32-Canned: Cooked 0.500000 39 1.000 1.000
42-Frozen: Cooked 0.500000 41 1.000 1.000
44-Frozen: Boiled 0.500000 41 1.000 1.000
234 6A Beans-succulent-green
11-Uncooked 0.500000 40 1.000 1.000
12-Cooked: NFS 0.500000 40 1.000 1.000
14-Boiled 0.500000 40 1.000 1.000
31-Canned: NFS 0.500000 39 1.000 1.000
32-Canned: Cooked 0.500000 39 1.000 1.000
34-Canned: Boiled 0.500000 39 1.000 1.000
42-Frozen: Cooked 0.500000 41 1.000 1.000
44-Frozen: Boiled 0.500000 41 1.000 1.000
51-Cured: NFS (smoked/p 0.500000 40 1.000 1.000
235 6A Beans-succulent-other
34-Canned: Boiled 0.500000 39 1.000 1.000
236 6A Beans-succulent-yellow/wax
14-Boiled 0.500000 40 1.000 1.000
32-Canned: Cooked 0.500000 39 1.000 1.000
42-Frozen: Cooked 0.500000 41 1.000 1.000
238 15 Corn/sweet
11-Uncooked 0.700000 81 1.000 1.000
12-Cooked: NFS 0.700000 81 1.000 1.000
13-Baked 0.700000 81 1.000 1.000
14-Boiled 0.700000 81 1.000 1.000
32-Canned: Cooked 0.700000 79 1.000 1.000
34-Canned: Boiled 0.700000 79 1.000 1.000

35-Canned: Fried 0.700000 79 1.000 1.000
42-Frozen: Cooked 0.700000 80 1.000 1.000
241 6AB Peas (garden)-green
11-Uncooked 0.500000 44 1.000 1.000
12-Cooked: NFS 0.500000 44 1.000 1.000
13-Baked 0.500000 44 1.000 1.000
14-Boiled 0.500000 44 1.000 1.000
15-Fried 0.500000 44 1.000 1.000
31-Canned: NFS 0.500000 43 1.000 1.000
32-Canned: Cooked 0.500000 43 1.000 1.000
34-Canned: Boiled 0.500000 43 1.000 1.000
42-Frozen: Cooked 0.500000 45 1.000 1.000
44-Frozen: Boiled 0.500000 45 1.000 1.000
45-Frozen: Fried 0.500000 45 1.000 1.000
250 6B Beans-succulent-broadbeans 0.500000 40 1.000 1.000
257 6 Beans-succulent-hyacinth 0.500000 40 1.000 1.000
261 O Mushrooms 0.750000 103 1.000 1.000
262 3 Onions-green
11-Uncooked 0.750000 42 1.000 1.000
12-Cooked: NFS 0.750000 42 1.000 1.000
13-Baked 0.750000 42 1.000 1.000
14-Boiled 0.750000 42 1.000 1.000
15-Fried 0.750000 42 1.000 1.000
31-Canned: NFS 0.750000 42 1.000 1.000
32-Canned: Cooked 0.750000 42 1.000 1.000
275 15 Sorghum (including milo) 0.750000 73 1.000 1.000
282 1A Sugar-beet 0.001500 0 1.000 1.000
290 O Cottonseed-oil 0.002000 0 2.200 1.000
291 O Cottonseed-meal 0.002000 0 0.440 1.000
315 O Grapes-wine and sherry 0.750000 37 1.000 1.000
336 M Sheep-meat byproducts 0.450000 108 1.000 1.000
337 M Sheep-other organ meats 0.450000 109 1.000 1.000
338 M Sheep-fat w/o bone 2.200000 104 1.000 1.000
339 M Sheep-kidney 0.450000 105 1.000 1.000
340 M Sheep-liver 0.005000 107 1.000 1.000
341 M Sheep-lean (fat free) w/o bone 0.130000 106 1.000 1.000
377 11 Apples-juice-concentrate 0.500000 1 3.000 1.000
378 O Bananas-juice 0.002800 0 1.000 1.000
379 1A Sugar-beet-molasses 0.000090 0 0.500 1.000
380 13A Blackberries-juice 0.500000 10 1.000 1.000
383 5B Cabbage-savoy 0.700000 16 1.000 1.000
384 4B Celery juice
31-Canned: NFS 0.700000 22 1.000 1.000
389 O Cranberries-juice-concentrate 0.500000 26 3.300 1.000
392 O Grapes-juice-concentrate 0.750000 38 3.000 1.000
402 12 Peaches-juice 0.700000 60 1.000 1.000
404 11 Pears-juice 0.500000 64 1.000 1.000
405 6B Peas-succulent/blackeye/cowpea
12-Cooked: NFS 0.500000 44 1.000 1.000
14-Boiled 0.500000 44 1.000 1.000
32-Canned: Cooked 0.500000 43 1.000 1.000
42-Frozen: Cooked 0.500000 45 1.000 1.000
406 O Pineapples-juice-concentrate 0.500000 65 0.440 1.000
410 12 Apricot juice 0.500000 7 1.000 1.000

415	9B	Squash-spaghetti	0.500000	76	1.000	1.000
416	O	Strawberries-juice	0.500000	78	1.000	1.000
420	10	Tangerines-juice-concentrate	0.700000	99	3.200	1.000
423	8	Tomatoes-dried	0.750000	84	14.300	1.000
431	14	Walnut oil	0.000700	0	1.000	1.000
436	9A	Watermelon-juice	0.750000	89	1.000	1.000
439	9B	Wintermelon	0.750000	17	1.000	1.000
441	10	Grapefruit-juice-concentrate	0.700000	35	3.900	1.000
442	10	Lemons-juice-concentrate	0.700000	99	5.700	1.000
443	10	Limes-juice-concentrate	0.700000	99	3.000	1.000
448	10	Grapefruit peel	0.700000	96	1.000	1.000
450	1AB	Ginseng	0.750000	34	1.000	1.000
451	5A	Broccoli-chinese	0.700000	12	1.000	1.000
452	5B	Bok choy				
		11-Uncooked	0.700000	12	1.000	1.000
		12-Cooked: NFS	0.700000	12	1.000	1.000
		14-Boiled	0.700000	12	1.000	1.000
		42-Frozen: Cooked	0.700000	12	1.000	1.000
		51-Cured: NFS (smoked/p	0.700000	12	1.000	1.000
480	O	Plantains-green	0.002800	0	1.000	1.000
481	O	Plantains-dried	0.002800	0	3.900	1.000
484	O	Radishes-oriental	0.100000	70	1.000	1.000
492	O	Radicchio	0.700000	68	1.000	1.000
497	9B	Balsam pear	0.500000	17	1.000	1.000

U.S. Environmental Protection Agency Ver. 6.78
DEEM **ACUTE analysis for DIAZINON** (1989-92 data)
Residue file: diazinon-acute.R96 Adjustment factor #2 NOT used.
Analysis Date: 12-20-1999/14:10:01 Residue file dated: 12-08-1999/14:56:21/8
Acute Reference Dose (aRfD) = 0.002500 mg/kg body-wt/day
NOEL (Acute) = 0.250000 mg/kg body-wt/day
MC iterations = 1000 MC list in residue file MC seed = 10
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Summary calculations:

	5th Percentile			1st Percentile			0.1st Percentile		
	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE
U.S. pop - all seasons:	0.000071	2.84	3515	0.000191	7.65	1306	0.000881	35.24	283
U.S. pop - spring season:	0.000075	3.01	3326	0.000176	7.06	1416	0.000726	29.03	344
U.S. pop - summer season:	0.000067	2.70	3708	0.000181	7.26	1377	0.000906	36.25	275
U.S. pop - autumn season:	0.000076	3.02	3308	0.000212	8.48	1179	0.000867	34.68	288
U.S. pop - winter season:	0.000067	2.68	3732	0.000197	7.87	1270	0.001062	42.48	235
Northeast region:	0.000077	3.08	3245	0.000227	9.08	1101	0.001065	42.59	234
Midwest region:	0.000071	2.83	3539	0.000173	6.92	1445	0.000671	26.83	372
Southern region:	0.000057	2.30	4352	0.000146	5.82	1717	0.000724	28.94	345
Western region:	0.000092	3.67	2725	0.000250	10.02	998	0.001114	44.55	224
Hispanics:	0.000059	2.35	4256	0.000164	6.56	1525	0.001073	42.92	232
Non-hispanic whites:	0.000074	2.96	3373	0.000191	7.63	1310	0.000815	32.61	306
Non-hispanic blacks:	0.000058	2.33	4294	0.000152	6.07	1646	0.000682	27.30	366
Non-hispanic other:	0.000117	4.67	2140	0.000497	19.88	503	0.001606	64.23	155
All infants (<1 year):	0.000100	4.01	2496	0.000244	9.75	1025	0.000688	27.52	363
Nursing infants (<1 year):	0.000100	3.99	2507	0.000219	8.74	1143	0.000745	29.80	335
Non-nursing infants (<1 yr):	0.000100	3.98	2512	0.000249	9.94	1005	0.000669	26.74	373
Children (1-6 years):	0.000107	4.29	2331	0.000334	13.36	748	0.001499	59.97	166
Children (7-12 years):	0.000070	2.80	3571	0.000181	7.25	1379	0.000687	27.48	363
Females (13+/preg/not nsg):	0.000058	2.32	4307	0.000159	6.36	1571	0.000925	37.00	270

Females (13+/nursing):

0.000113	4.51	2215	0.000313	12.52	798	0.000566	22.63	441

Females (13-19 yrs/np/nn):

0.000044	1.76	5676	0.000124	4.97	2012	0.000440	17.62	567

Females (20+ years/np/nn):

0.000070	2.79	3586	0.000177	7.08	1412	0.000855	34.19	292

Females (13-50 years):

0.000066	2.65	3766	0.000172	6.86	1457	0.000854	34.18	292

Males (13-19 years):

0.000036	1.44	6937	0.000127	5.10	1961	0.000585	23.38	427

Males (20+ years):

0.000066	2.65	3771	0.000189	7.55	1324	0.000909	36.38	274

Seniors (55+):

0.000069	2.75	3638	0.000210	8.39	1192	0.000908	36.32	275

Pacific Region:

0.000096	3.85	2594	0.000244	9.76	1024	0.001104	44.15	226

U.S. Environmental Protection Agency Ver. 6.78
DEEM ACUTE analysis for DIAZINON (1989-92 data)
Residue file: diazinon-acute-noSheep.R96 Adjustment factor #2 NOT used.
Analysis Date: 12-20-1999/14:40:43 Residue file dated: 12-19-1999/14:52:28/8
Acute Reference Dose (aRfD) = 0.002500 mg/kg body-wt/day
NOEL (Acute) = 0.250000 mg/kg body-wt/day
MC iterations = 1000 MC list in residue file MC seed = 10
Run Comment: Acute analysis with **all sheep commodities removed**

Summary calculations:

	5th Percentile			1st Percentile			0.1st Percentile		
	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE	Exposure	% aRfD	MOE
U.S. pop - all seasons:	0.000068	2.72	3672	0.000167	6.68	1497	0.000660	26.42	378
U.S. pop - spring season:	0.000073	2.92	3419	0.000164	6.55	1526	0.000461	18.44	542
U.S. pop - summer season:	0.000065	2.59	3860	0.000156	6.24	1603	0.000641	25.64	390
U.S. pop - autumn season:	0.000071	2.82	3544	0.000181	7.23	1383	0.000651	26.03	384
U.S. pop - winter season:	0.000065	2.61	3838	0.000166	6.63	1508	0.000919	36.77	271
Northeast region:	0.000071	2.83	3538	0.000182	7.26	1377	0.000612	24.47	408
Midwest region:	0.000069	2.78	3601	0.000161	6.44	1553	0.000543	21.72	460
Southern region:	0.000057	2.28	4377	0.000142	5.67	1764	0.000643	25.70	389
Western region:	0.000084	3.36	2978	0.000197	7.89	1268	0.000938	37.52	266
Hispanics:	0.000057	2.27	4407	0.000141	5.64	1774	0.000808	32.30	309
Non-hispanic whites:	0.000071	2.86	3500	0.000172	6.88	1453	0.000656	26.23	381
Non-hispanic blacks:	0.000057	2.27	4406	0.000136	5.44	1836	0.000530	21.19	471
Non-hispanic other:	0.000072	2.89	3455	0.000206	8.24	1213	0.000870	34.78	287
All infants (<1 year):	0.000097	3.90	2564	0.000229	9.14	1093	0.000658	26.33	379
Nursing infants (<1 year):	0.000103	4.10	2436	0.000232	9.27	1078	0.000739	29.57	338
Non-nursing infants (<1 yr):	0.000097	3.87	2581	0.000230	9.22	1084	0.000635	25.39	393
Children (1-6 years):	0.000105	4.18	2390	0.000300	11.98	834	0.001187	47.47	210
Children (7-12 years):	0.000068	2.72	3672	0.000171	6.83	1463	0.000597	23.89	418
Females (13+/preg/not nsg):	0.000054	2.16	4634	0.000134	5.36	1864	0.000350	13.98	715
Females (13+/nursing):	0.000102	4.10	2439	0.000295	11.80	847	0.000533	21.33	468
Females (13-19 yrs/np/nn):	0.000043	1.72	5800	0.000113	4.53	2208	0.000274	10.95	913
Females (20+ years/np/nn):	0.000068	2.71	3688	0.000161	6.42	1557	0.000691	27.64	361

Females (13-50 years):								
0.000065	2.60	3850	0.000161	6.45	1549	0.000603	24.14	414
Males (13-19 years):								
0.000035	1.41	7096	0.000120	4.78	2090	0.000516	20.66	484
Males (20+ years):								
0.000063	2.51	3989	0.000150	6.01	1663	0.000545	21.80	458
Seniors (55+):								
0.000064	2.57	3890	0.000157	6.27	1593	0.000691	27.62	362
Pacific Region:								
0.000090	3.62	2763	0.000211	8.43	1186	0.001003	40.14	249